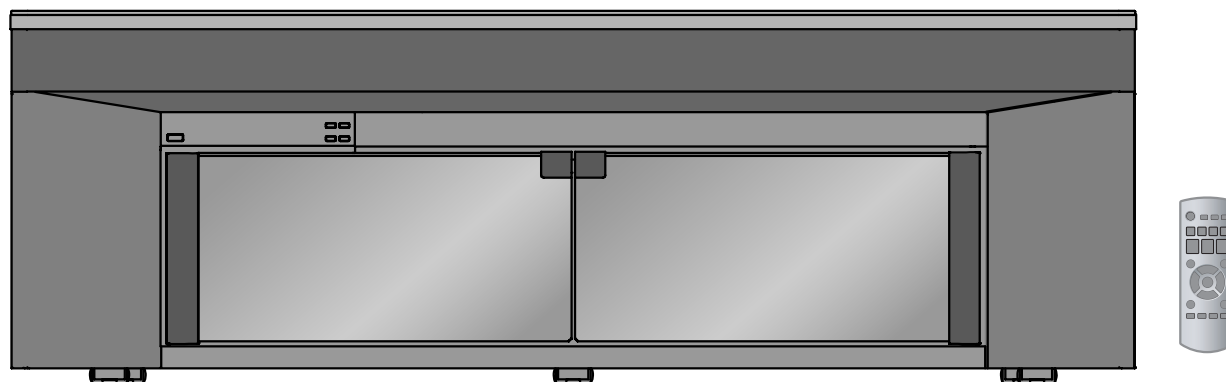


Operating Instructions *Home Theater Audio System*

Model No. **SC-HTR310**



If you have any questions contact
1-800-211-PANA (7262)

Dear customer

Thank you for purchasing this product.

For optimum performance and safety, please read these instructions carefully.

Before connecting, operating or adjusting this product, please read the instructions completely.


Please keep this manual for future reference.

HDMI™
HIGH-DEFINITION MULTIMEDIA INTERFACE


VIERA Link™




As an ENERGY STAR® Partner, Panasonic has determined that this product meets the ENERGY STAR® guidelines for energy efficiency.




CAUTION
 RISK OF ELECTRIC SHOCK
 DO NOT OPEN



CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE SCREWS. NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated “dangerous voltage” within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

-If you see this symbol-

Information on Disposal in other Countries outside the European Union



This symbol is only valid in the European Union. If you wish to discard this product, please contact your local authorities or dealer and ask for the correct method of disposal.

WARNING:
 TO REDUCE THE RISK OF FIRE, ELECTRIC SHOCK OR PRODUCT DAMAGE,

- DO NOT EXPOSE THIS APPARATUS TO RAIN, MOISTURE, DRIPPING OR SPLASHING AND THAT NO OBJECTS FILLED WITH LIQUIDS, SUCH AS VASES, SHALL BE PLACED ON THE APPARATUS.
- USE ONLY THE RECOMMENDED ACCESSORIES.
- DO NOT REMOVE THE COVER (OR BACK); THERE ARE NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The socket outlet shall be installed near the equipment and easily accessible. The mains plug of the power supply cord shall remain readily operable. To completely disconnect this apparatus from the AC Mains, disconnect the power supply cord plug from AC receptacle.

HDMI, the HDMI logo and High-Definition Multimedia Interface are trademarks or registered trademarks of HDMI Licensing LLC.

HDAVI Control™ is a trademark of Matsushita Electric Industrial Co., Ltd.





EZ Sync™ is a trademark of Matsushita Electric Industrial Co., Ltd.

VIERA Link™ is a trademark of Matsushita Electric Industrial Co., Ltd.

Manufactured under license from Dolby Laboratories. Dolby, Pro Logic, and the double-D symbol are trademarks of Dolby Laboratories.

“DTS” and “DTS Digital Surround” are registered trademarks of DTS, Inc.

Digital signals that can be played on this system

Dolby Digital	DTS	PCM (2-channel)	Multi-channel LPCM (Linear PCM)
DVD etc. 	DVD etc. 	CD, DVD audio etc.  (Signals with sampling frequencies of up to 96 kHz)	Blu-ray disc, DVD audio etc.  (Signals with sampling frequencies of up to 48 kHz)

Note

- Playback of the following signals is also available when you make HDMI connections. (➡ pages 17 and 28)
 - PCM signals with sampling frequencies of over 96 kHz
 - Multi-channel signals with sampling frequencies of over 48 kHz
- ✖ Depending on the connected equipment, the playback condition differs. (Playback may be impossible if not supported.)
See operating instructions of playback equipment for more information.
- See “Glossary” (➡ page 38) for more detailed information on each signal.

FCC Note:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Any unauthorized changes or modifications to this equipment would void the user’s authority to operate this device.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Responsible Party:
Panasonic Corporation of North America
One Panasonic Way
Secaucus, NJ 07094

Support Contact:
Panasonic Consumer Electronics Company
Telephone No.: 1-800-211-PANA (7262)

Setting up your Home Theater system

Step
1

Installing the rack (↪ pages 10 to 15)

After you have installed the rack, attach the glass top panel, shelf and glass doors.

Step
2

Connecting the television and DVD player (↪ page 16)

(Peripheral equipment and cables are not included unless otherwise mentioned.)

- **Recommended TV size: 50 inches or less**

Basic connection (↪ page 16)

Connect with an HDMI cable for high-quality audio and video.
This connection requires HDMI terminals on both the television and the DVD recorder. (↪ page 17)

Step
3

Enjoying movies and music (↪ pages 24 to 27)


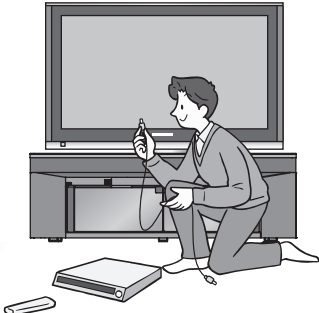
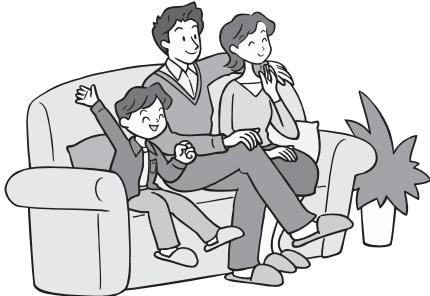

Enjoy surround sound with DVDs, TV, and other sources.

- **This system has built-in speakers.**

Do not connect other speakers with the front speakers, center speaker and subwoofer.

If you connect other speakers, the sound will not be produced with proper characteristics and malfunction may occur.

Table of contents

Before use		Digital signals that can be played on this system 3 Setting up your Home Theater system 4 Supplied accessories 6 Control guide 7 Remote control preparation 9
Connection		Installing and assembling the rack 10 Home Theater connections 16 Basic connections 16 Connecting equipment with HDMI terminal (TV, DVD recorder, etc.) 17 Connecting with digital terminal-mounted equipment 18 Connecting with VCR 19 Other connections 20 Connecting a set top box (cable or satellite) ... 20 Connecting a combination DVD recorder/VCR ... 21 AC power supply connection 22 Checking speaker output 23
Play		Enjoying movies and music 24 Sound field 26 Using the VIERA Link “HDAVI Control”™ .. 28 Functions and settings 29 Using “WHISPER MODE SURROUND” 29 Using “GAME” 29 Muting 29 Adjusting speaker output 29 REAL CENTER function 30 Adjusting sound quality 30 Adjusting the balance 30 Reducing standby power consumption (Standby mode) 31 Setting VIERA Link “HDAVI Control” to “OFF” ... 31 Adjusting the time lag by delaying audio output when pictures on TV arrives after sounds 31 Switching between dual sounds 32 Clear audio at low volume 32 Switching the attenuator 32 Setting input signals 33 Reset (factory settings) 33 When other equipment (mini component system, AV amp, etc.) manufactured by Panasonic operate 34
Reference		Error messages 35 Specifications 35 Troubleshooting guide 36 Product Service 37 Glossary 38 Maintenance 38 Limited Warranty 39

Before use
Connection
Play
Reference

Supplied accessories

Before use

Supplied accessories



Please check and identify the supplied accessories.
Use numbers when asking for replacement parts.
(Product numbers correct as of June 2008. These may be subject to change.)
To order accessories, refer to “Accessory Purchases” on page 39.

Supplied accessories for rack

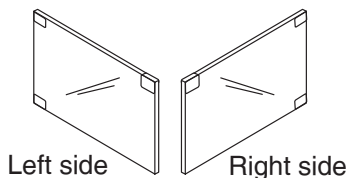
☐ 1 Glass top panel
(RXQ1618)



☐ 4 Caster stoppers (TBLB3008)



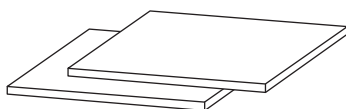
☐ 2 Glass doors
1 x Left (RXQ1607)
1 x Right (RXQ1608)



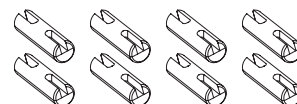
☐ 2 Screws
(XTW4+16AFJK)



☐ 2 Shelves
(RKQ2G0004-K)

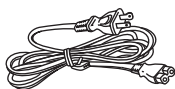


☐ 8 Moulded dowels
(RMQ1649)

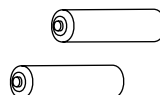


Supplied accessories for amplifier

☐ 1 AC power supply cord
(K2CB2CB00021)



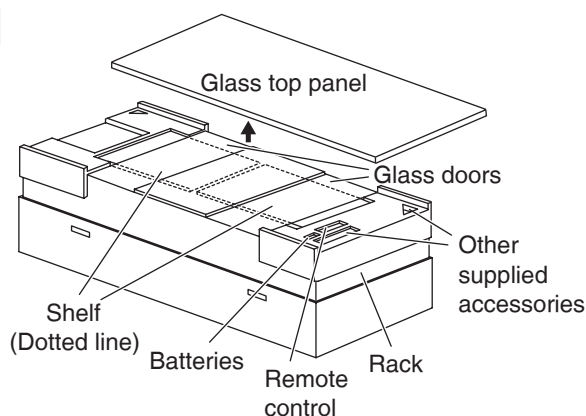
☐ 2 Batteries



☐ 1 Remote control
(N2QAYB000288)



Packing plan

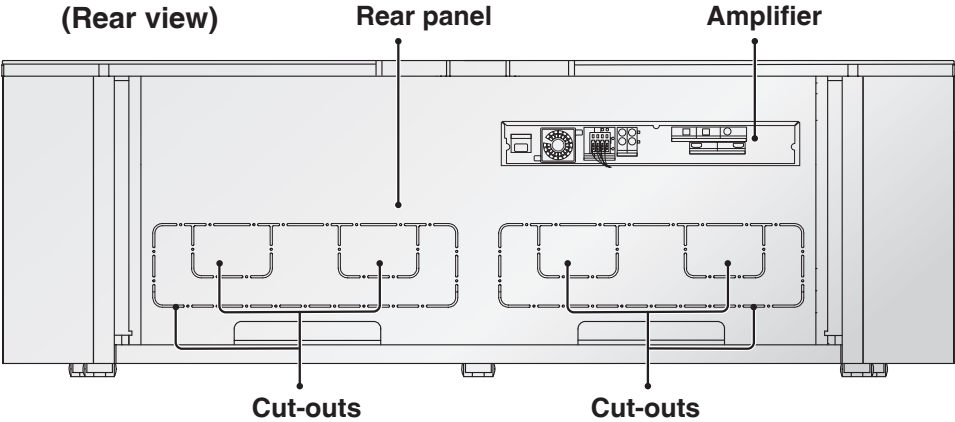
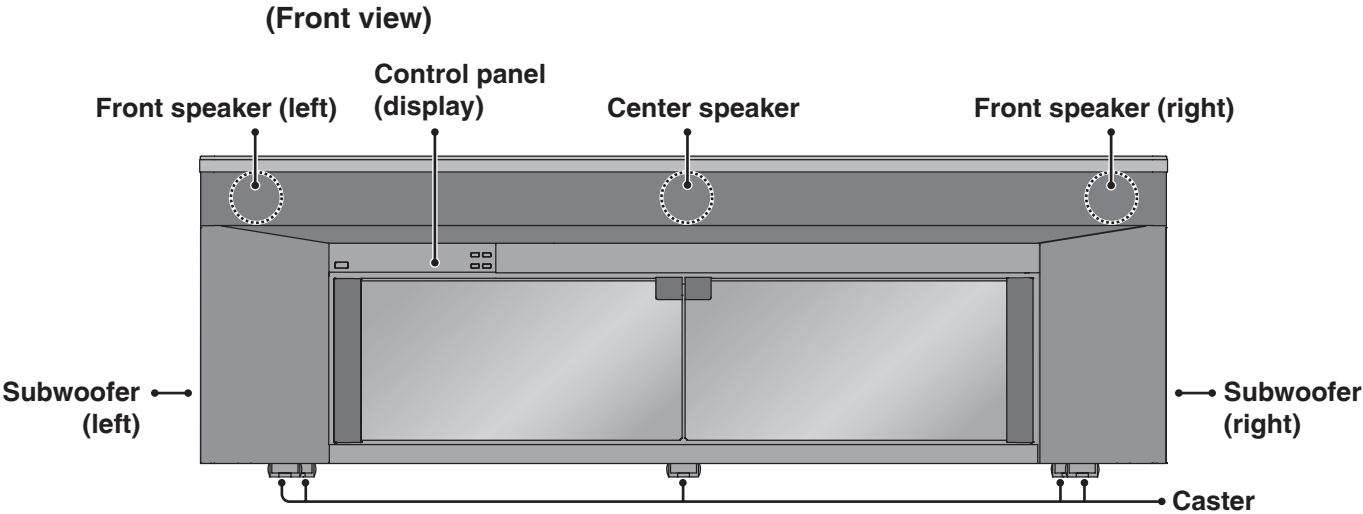


Control guide

This system

Before use

Control guide

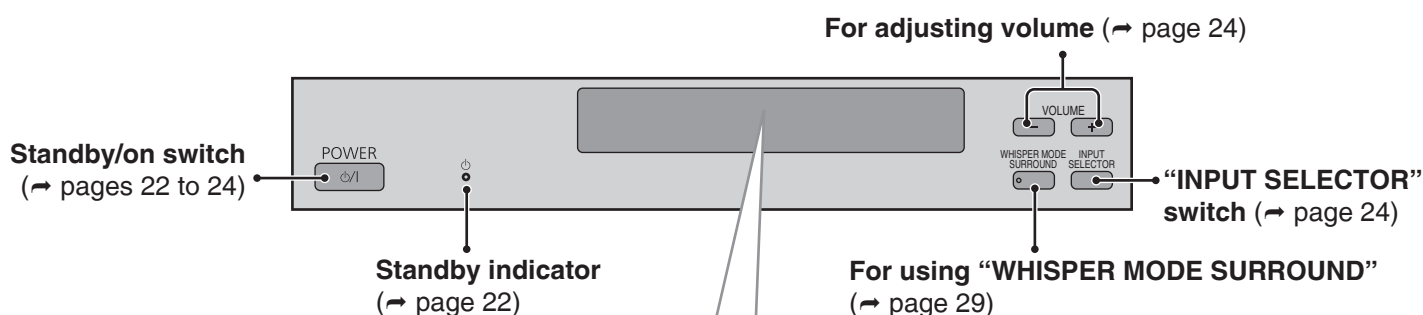


Control guide

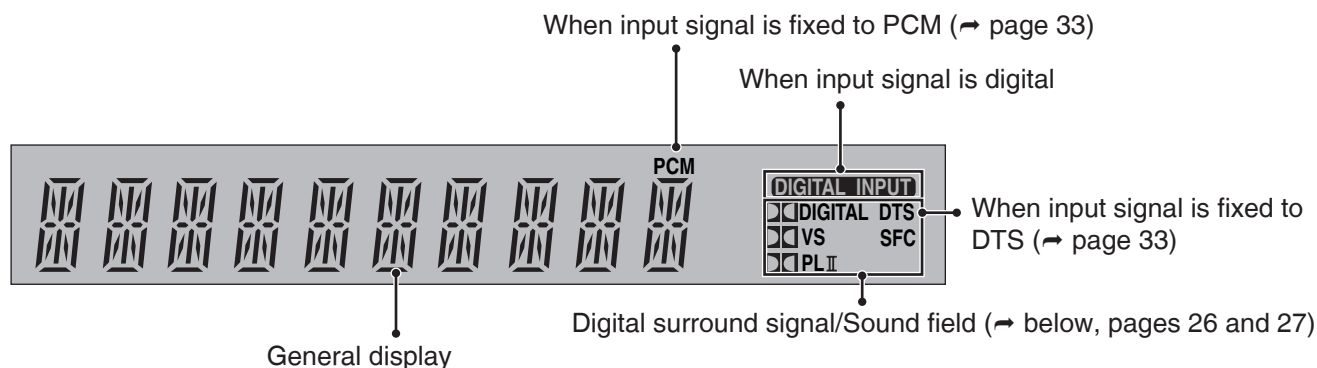
Before use

Control guide

Control panel

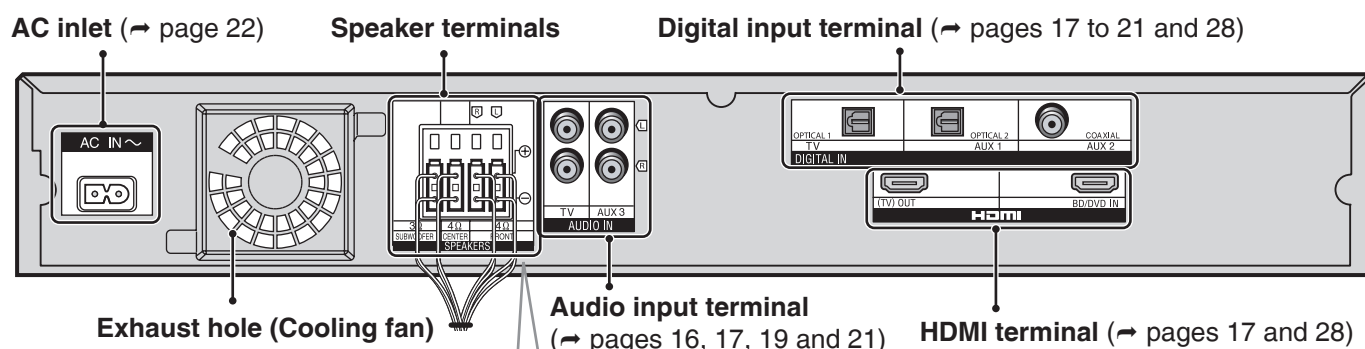


Display



DIGITAL	: Dolby Digital sources	PL II	: When Dolby Pro Logic II decoder is being used
DTS	: DTS sources		
VS	: When Dolby Virtual Speaker is working		
SFC	: When you are using an SFC mode		
			(When using Dolby Virtual Speaker on 2 channel stereo source)

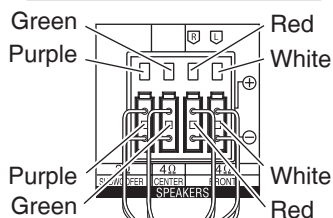
Amplifier



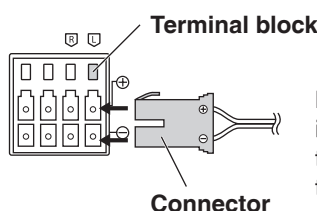
Speaker terminals

The speakers are already connected. Do not touch the connectors unless absolutely necessary.
If the connectors become disconnected, refer to the illustrations below for connection.

Connector connection

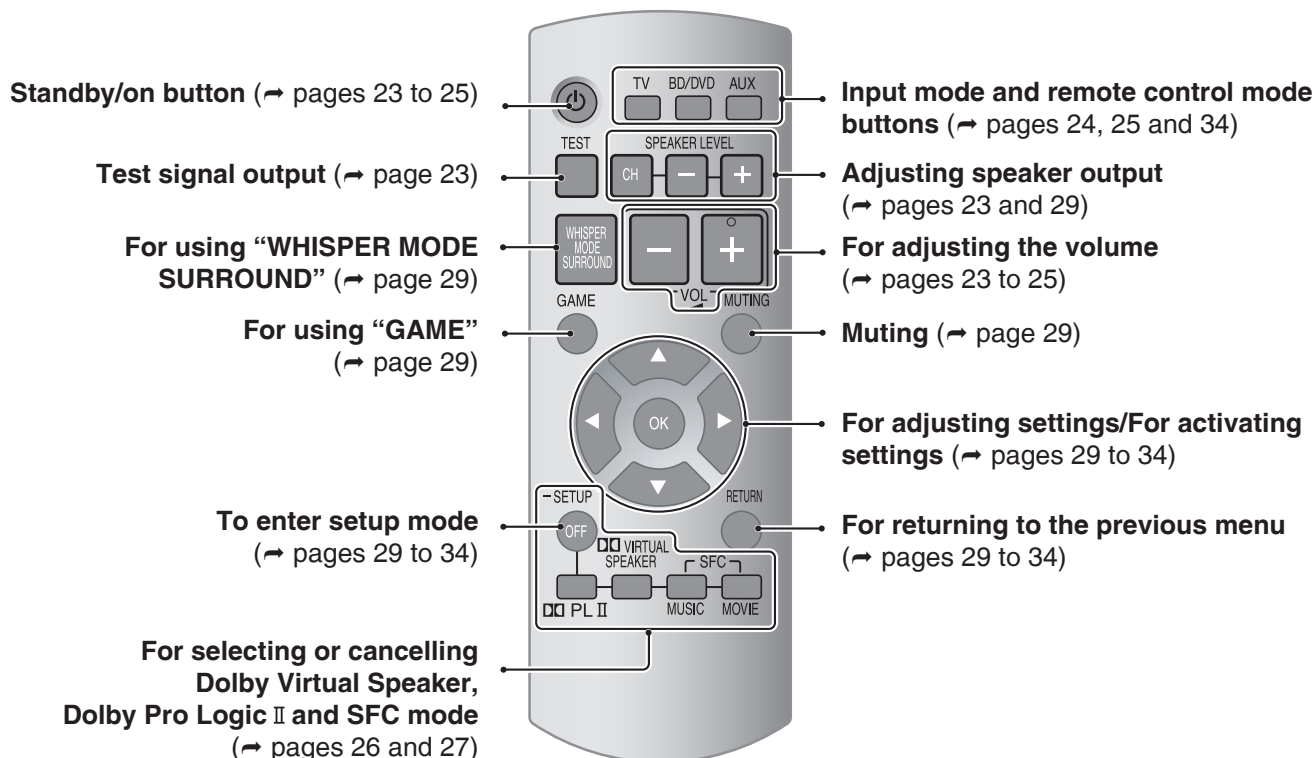


How to attach the connectors



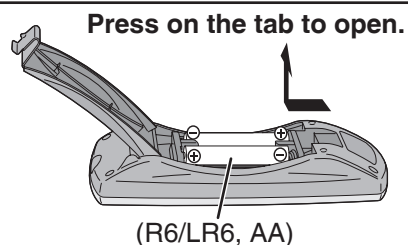
Make sure the color on the connector indicates the same as corresponding terminal and insert the connector straight all the way.

Remote control



Remote control preparation

Inserting the batteries



Insert so the poles (+ and -) match those in the remote control.

Do not:

- mix old and new batteries.
- use different types at the same time.
- take apart or short circuit.
- attempt to recharge alkaline or manganese batteries.
- use batteries if the covering has been peeled off.

Mishandling of batteries can cause electrolyte leakage which can severely damage the remote control.

Remove the batteries if the remote control is not going to be used for a long period of time. Store in a cool, dark place.

CAUTION

Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions.

- Do not use rechargeable type batteries.
- Do not heat or expose to flame.
- Do not leave the batteries in an automobile exposed to direct sunlight for a long period of time with doors and windows closed.

Using the remote control

Remote control signal sensor



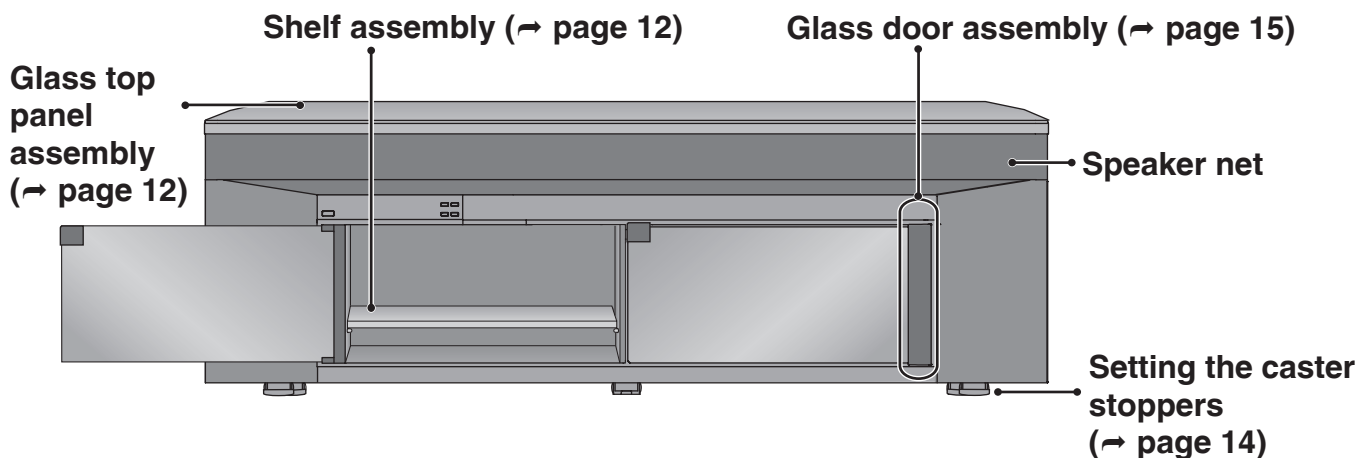
Within 7 meters (23 feet) at the front (actual distance depends on the angle)

Transmission window

Note

- Do not place an object between the signal sensor and the remote control.
- Do not place the signal sensor under direct sunlight or the strong light of a fluorescent lamp.
- Keep the transmission window and the system's sensor free from dust.

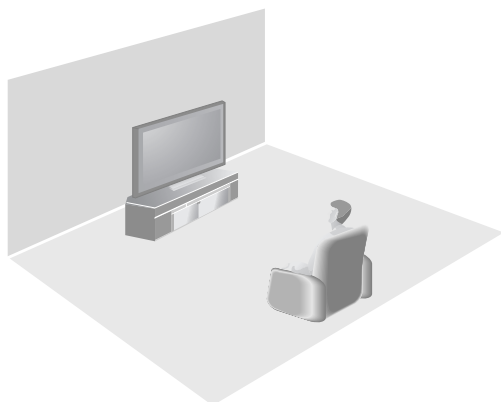
Installing and assembling the rack



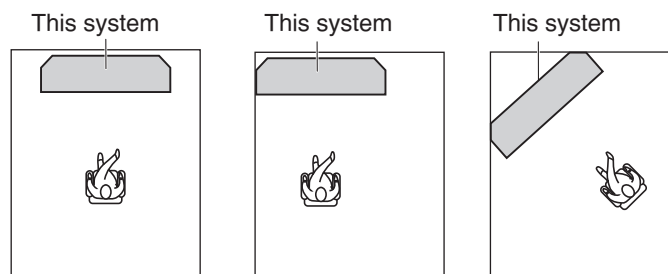
Installing each equipment (DVD player/Blu-ray Disc player/DVD recorder → page 13)
(TV → page 13)

Installation

- At least 2 people are necessary for installation.
- Use a Phillips-head screwdriver. (Do not use a powered screwdriver.)
- Choose a stable location for installation.
- Handle the glass top panel and glass doors with enough care.



Setup example



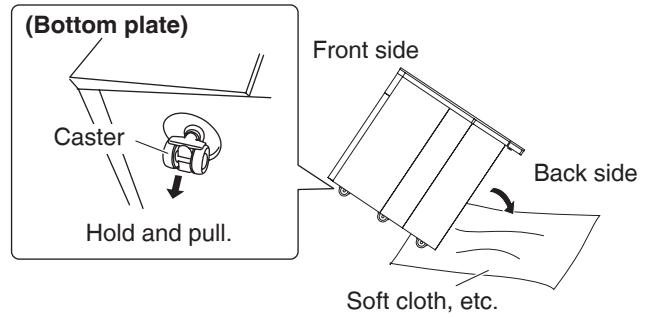
- Make sure to place the rack on a flat, stable surface so there is no danger of it falling over. Take enough safety measures to prevent the television from falling down.
- You can install this system so that it is flush with the wall at either the sides or back, but you will require some space for working during setup and connection.
- Do not place in front of curtains as they may obstruct the system's exhaust hole.
- Avoid pressing on the speaker nets during installation.
- If the surface of the wooden floor is soft, the caster mark may remain.
- See page 11 for removing casters.

Caution

- Use the supplied speakers only with our home theater audio system. Failure to do so can damage the amplifier and speakers, and can cause fire.
- Consult a qualified service person if damage occurs or if performance worsens.

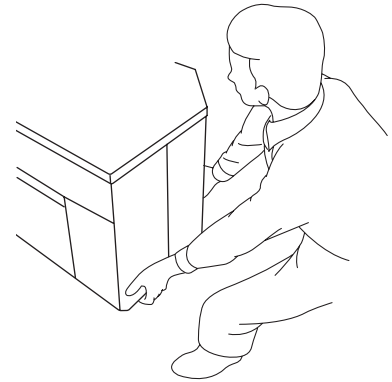
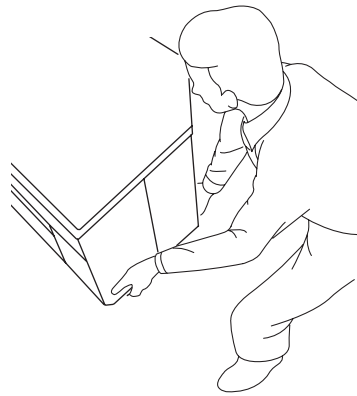
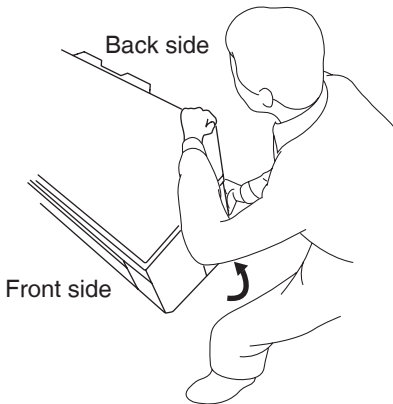
Removing casters

- Remove casters at unstable places. (thick-piled carpet, uneven floor, etc.)
- Spread soft cloth on the floor and tip the rack back to remove the casters.
- Hold and pull to remove.
- At least 2 people are necessary for removing casters.
- Make sure that at least 2 people hold the bottom plate when moving the rack after removing the casters. See the following instructions about how to lift the rack.
- Do not put anything on and in the rack when removing casters. Do not put the included glass top panel either.



How to lift the rack

- ① **Lift the back side of the top board and insert your hand to the bottom of the back side.**
- ② **Insert your hand to the bottom of the front side.**
- ③ **Lift the rack horizontally using your both hands.**

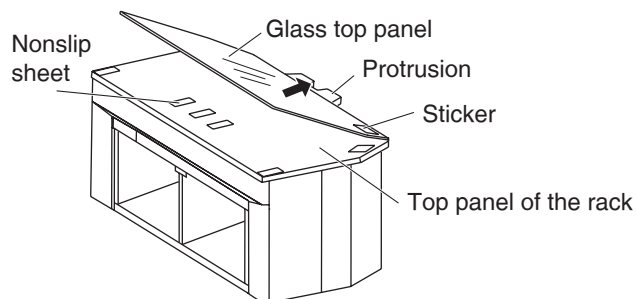


Installing and assembling the rack

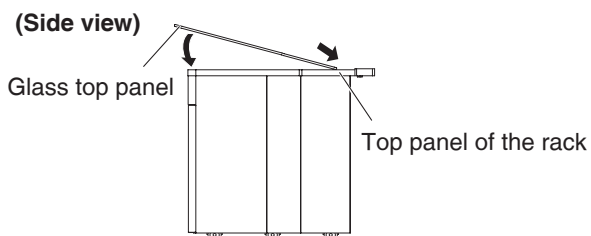
Glass top panel assembly

1 Adjust the included glass top panel so that it lines up with the protrusion on the back of the rack.

- The glass top panel has the front side and back side. Face up the front side with the sticker.
- The nonslip sheet has been put on the top panel of the rack. Do not remove the sheet when installing the glass top panel.



2 Put the glass panel down slowly to make sure its aligned with the rear of the top panel of the rack (as shown in the diagram).

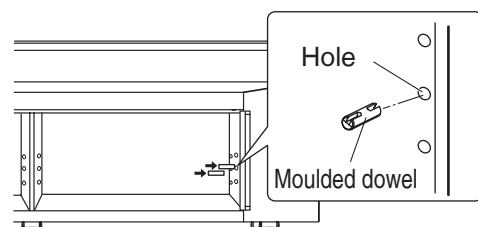


Note

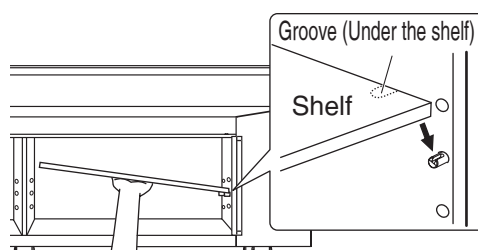
Lift up and down slowly not to make an impact on the glass.

Shelf assembly

1 Insert the moulded dowel (included) into the dowel hole on one side.

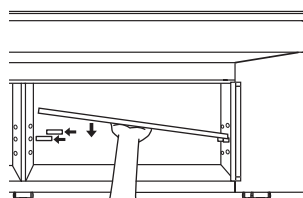


2 Insert the shelf (included) at an angle and adjust it so that the shelf groove is attached to the molded dowel.



3 Hold the shelf, insert the moulded dowel into the dowel hole on the other side. Set the shelf horizontally.

- The height of the shelf can be adjusted at 3 different levels.
- Change the position of the dowels to move the shelf up or down.
- Insert the moulded dowel not to lose even when the shelf is not set.



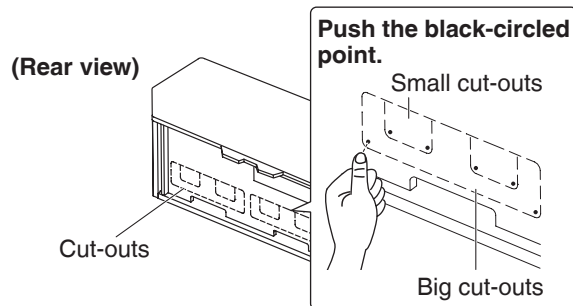
UNIT: mm (inches)

Dowel position		Upper	Middle	Lower	
Compartment	H	Upper shelf	101 (3 ³¹ / ₃₂ "	131 (5 ⁵ / ₃₂ ")	161 (6 ¹¹ / ₃₂ ")
		Lower shelf	101 (3 ³¹ / ₃₂ ")	71 (2 ²⁵ / ₃₂ ")	41 (1 ⁵ / ₈ ")
	W		448 (17 ⁵ / ₈ ") (both L and R)		
	D		354 (13 ¹⁵ / ₁₆ ")		

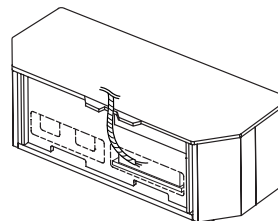
Installing a DVD player/Blu-ray Disc player/DVD recorder or other equipment on the shelf (Please also refer to the other equipment's operating instructions.)

1 Press the cut-out on the back panel using your thumb etc. with force to remove it for wiring after installing the equipment.

- Refer to pages 16 to 21 for connections with other equipment.
- If the operating instructions of the equipment require heat release or ventilation, remove the cut-out on the back panel to secure ventilation.
- When setting equipment with the exhaust hole on the side, follow the operating instruction of the equipment before setting.



2 Pull out the bundled cords of stored equipment from the cut-outs for connection.

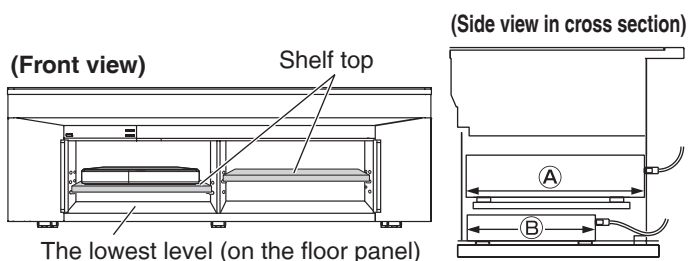


Note

- Do not put equipment weighing more than 12 kg (26.5 lbs) on the upper shelf or more than 20 kg (44.1 lbs) on the lower shelf.
- Image interference may occur if you put a DVD recorder, etc. on the upper shelf. Put it on the lower shelf if this occurs.
- Depending on the equipment to install, the cables may not be connected.

To install the equipment, adjust the height of the shelf to the position where the cables come out.

- If you set on the lowest level (on the floor panel), the equipment with long depth may not be set properly or the equipment cord may not be taken out.
- When installing equipment, refer to the table for "Shelf assembly" on page 12.



Shelf top (dimension A): 348 mm (13 11/16") 13 (Maximum depth of equipment when the big cut-outs part on the back panel is opened)

Shelf top (dimension A): 255 mm (10 1/16") (Maximum depth of equipment when the small cut-outs part on the back panel is opened)

The lowest level (on the floor panel) (dimension B): 255 mm (10 1/16") (Maximum depth of equipment)

Installing the television (Please also refer to the television's operating instructions.)

Recommended: 50 inches or less

Place the television (with stand attached) in the center of the rack.

Note

- Lift the television when placing it on the rack. Dragging it may damage the top panel.
(For details, refer to the television's operating instructions.)
- If the television stand adheres to the glass top panel too tight to remove, lift the stand inserting a flat and thin object. This may help removing the stand.
- Install the rotary television stand not to run over the rack even if it rotates.

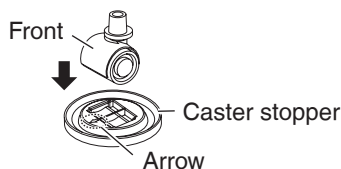


Installing and assembling the rack

Setting the caster stoppers

Set the caster stoppers (included) under the casters to fix this system and prevent from moving.

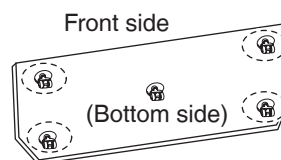
- When setting the caster stoppers, match the front side of caster with the arrow of the caster stopper.



- Lift the rack to remove caster stoppers. See page 11 about how to lift the rack.

(Caster stopper position)

Set the caster stoppers under 4 casters circled with the dotted line of figure below.



Stabilising the television

Attach the television to the rack to prevent it from falling over.

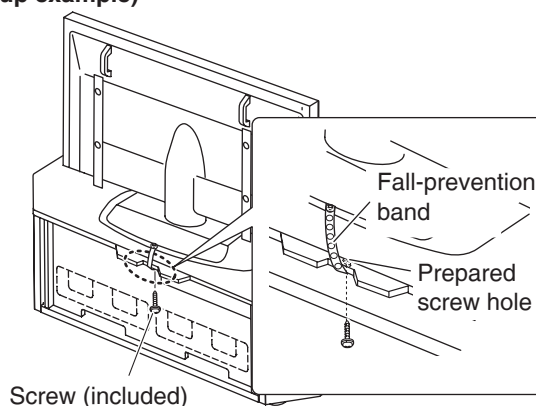
■ Fixing to the rack

- Attach the fall-prevention band etc. supplied with TV using the included screws as illustrated at right. (If the fall-prevention band is not supplied with TV, use a commercially available band to fix.)
Attach the fall-prevention band to the prepared hole in the center of the underside of the top board.
If the hole is not positioned at a suitable place, drill approx. 2 mm ($\frac{3}{32}$ ") hole on the underside and attach the band with the screw.
- If you fasten the screw too tightly, it goes around in circles and the TV cannot be fixed.

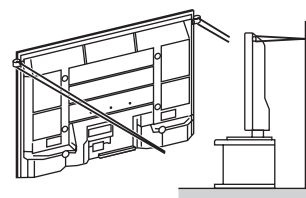
■ Fixing to the wall

- Use commercially available screws, strong string or chain suitable for materials of the wall or pillar to fix to the solid parts.
- Walls and pillars must be strong enough to support the weight of TV. Ask installation personnel for more information.
- Fix 2 parts at both left and right.

(Setup example)



(Setup example)

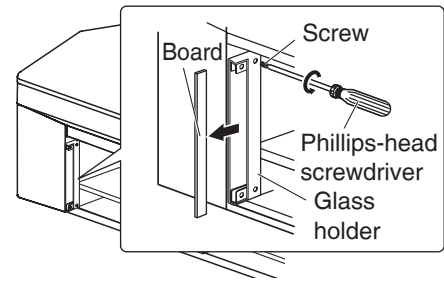


The illustration is an example.
The shape may differ from the actual product.

Glass door assembly

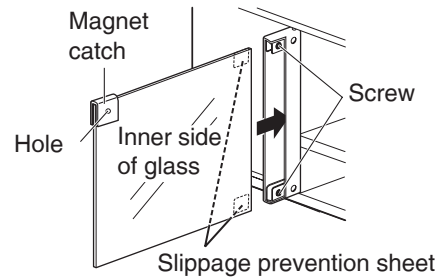
1 Remove 4 screws from the glass holder using a Phillips-head screwdriver and take out the board.

- Before taking out the board, remove the tape fixing the glass holder.
- Use the Phillips-head screwdriver that matches the screw size.

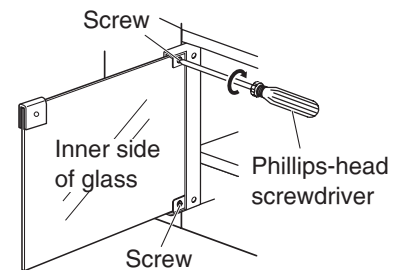


2 Insert the glass door (included) to the glass holder firmly and tighten the 2 screws in front tentatively.

- The illustration at right shows how to fix the left glass door.
- One side of the magnet catch has a hole. This is the inner side of the glass.
- The slippage prevention sheet is pasted on the glass holder inserting part on the surface of the glass door. Fix as it is.

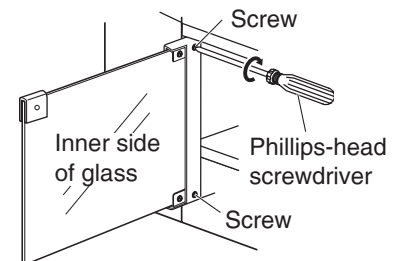


3 Close the glass door to adjust the height and gap on both sides. Open the glass door so it does not misalign and tighten 2 screws in front with the Phillips-head screwdriver.



4 Tighten 2 screws at the back firmly.

- Install the other glass door in the same way.



Home Theater connections

Basic connections

Connection cable

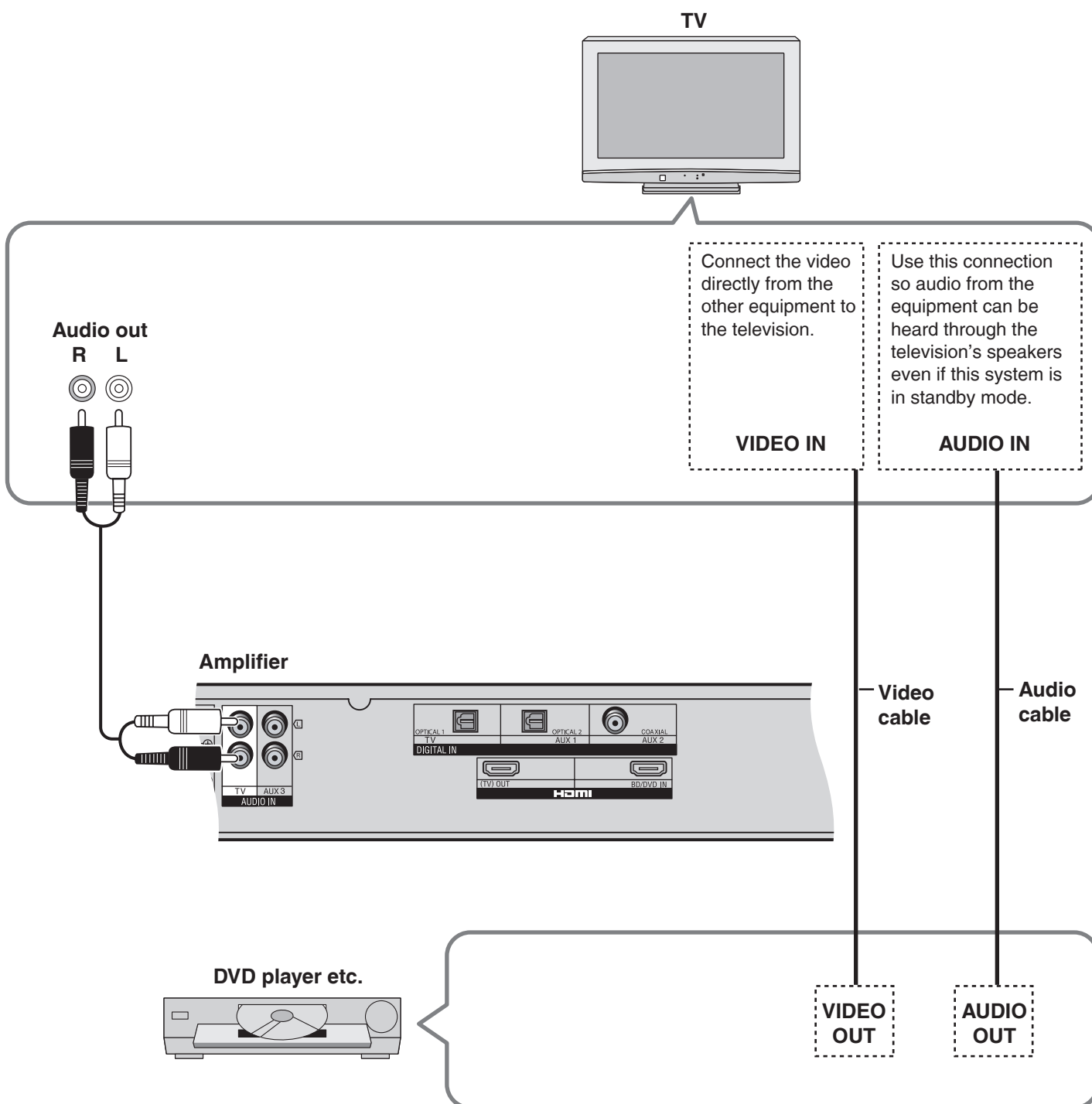
Stereo connection cable (not included)



- Refer to the operating instructions for the equipment you are connecting for the correct type of video cable.

Connection

Home Theater connections






Reduce the volume on the television and select “TV” after you have done connections as above if you want to use this system.

- Turn off all components before making any connections.
- To connect equipment, refer to the appropriate operating instructions.

Connecting equipment with HDMI terminal (TV, DVD recorder, etc.)

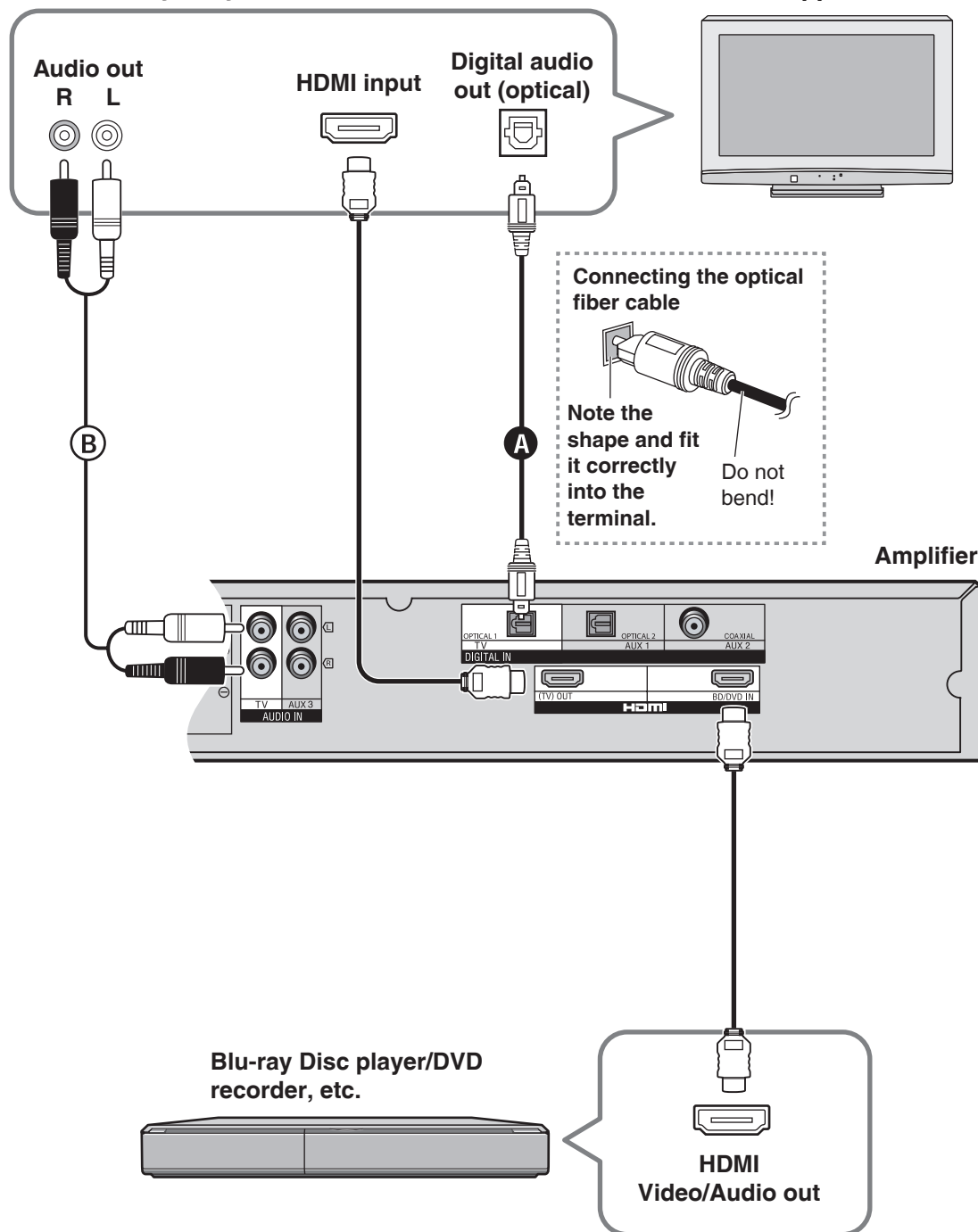
Connection cable

Stereo connection cable (not included) 	HDMI cable (not included) 	Optical fiber cable (not included) 
--	--	---

HDMI cable notes

- Use a Panasonic HDMI cable for best results.

Make the connection either **A** or **B** according to the suitability for your equipment.



Home Theater connections

Connecting with digital terminal-mounted equipment

Connection cable

Optical fiber cable (not included)



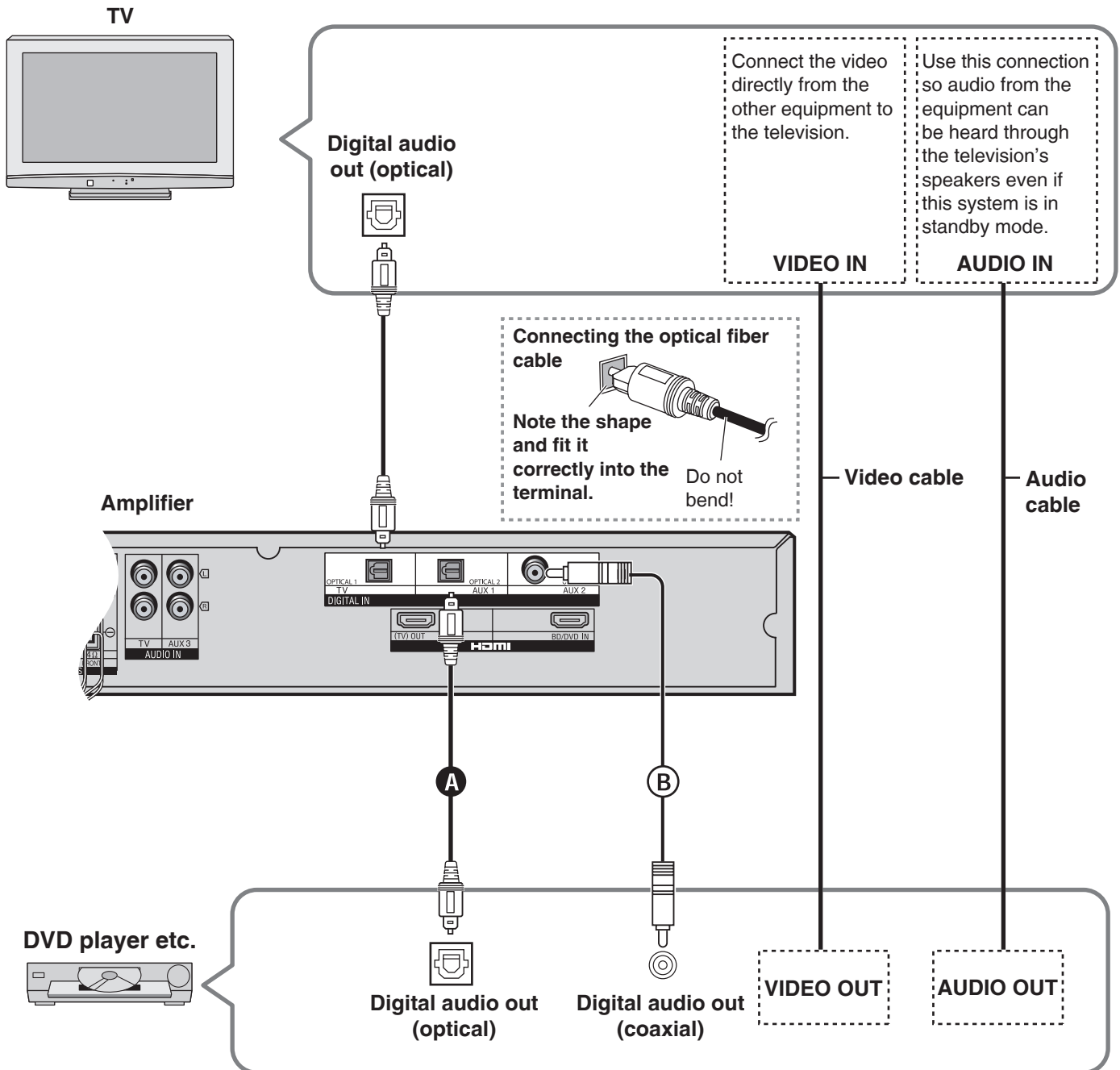
Coaxial cable (not included)



- Refer to the operating instructions for the equipment you are connecting for the correct type of video cable.

Connection

Home Theater connections



Make the connection either ❶ or ❷ according to the suitability for your equipment.

- Turn off all components before making any connections.
- To connect equipment, refer to the appropriate operating instructions.

Connecting with VCR

Connection cable

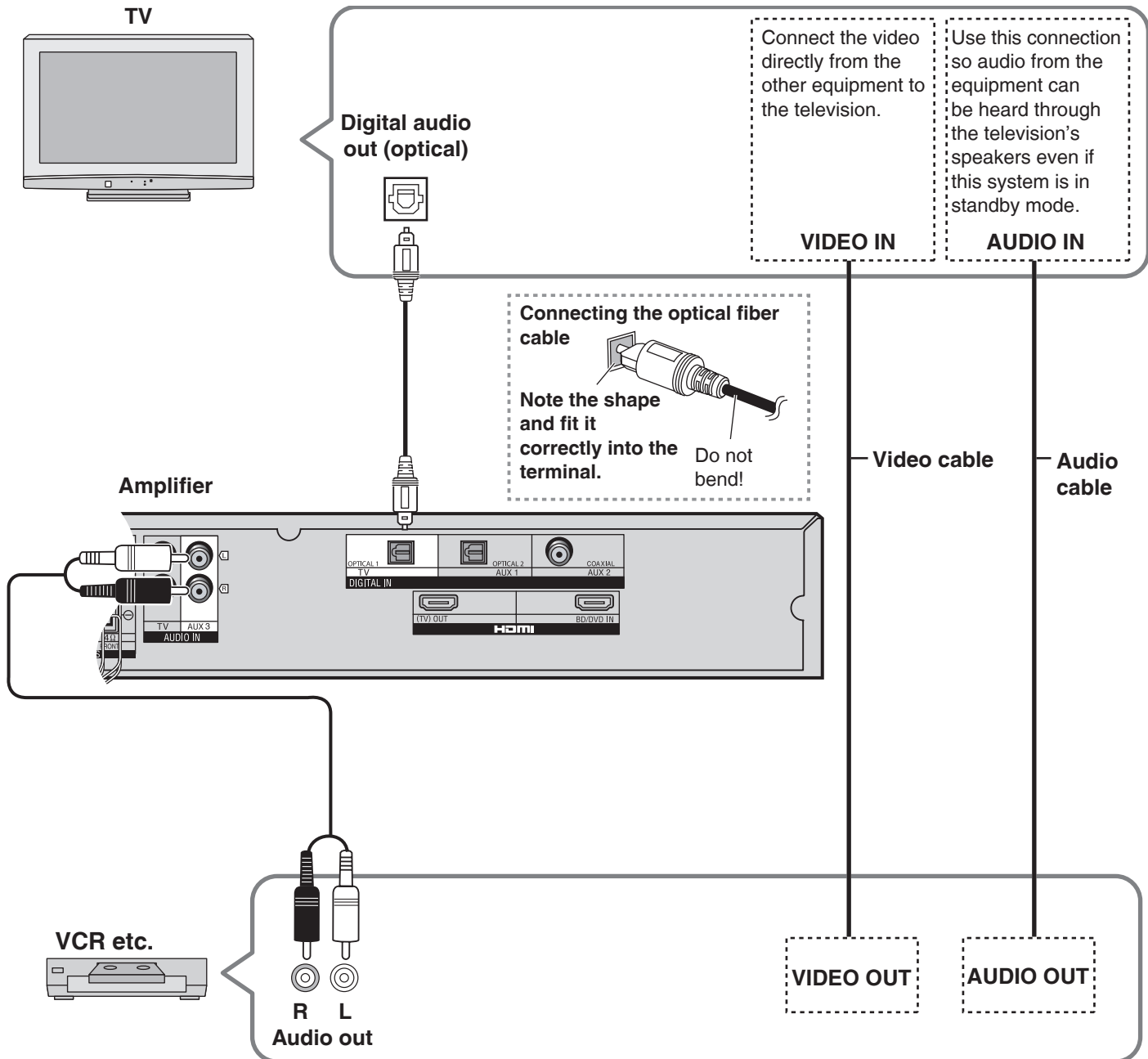
Stereo connection cable (not included)



Optical fiber cable (not included)





- Refer to the operating instructions for the equipment you are connecting for the correct type of video cable.



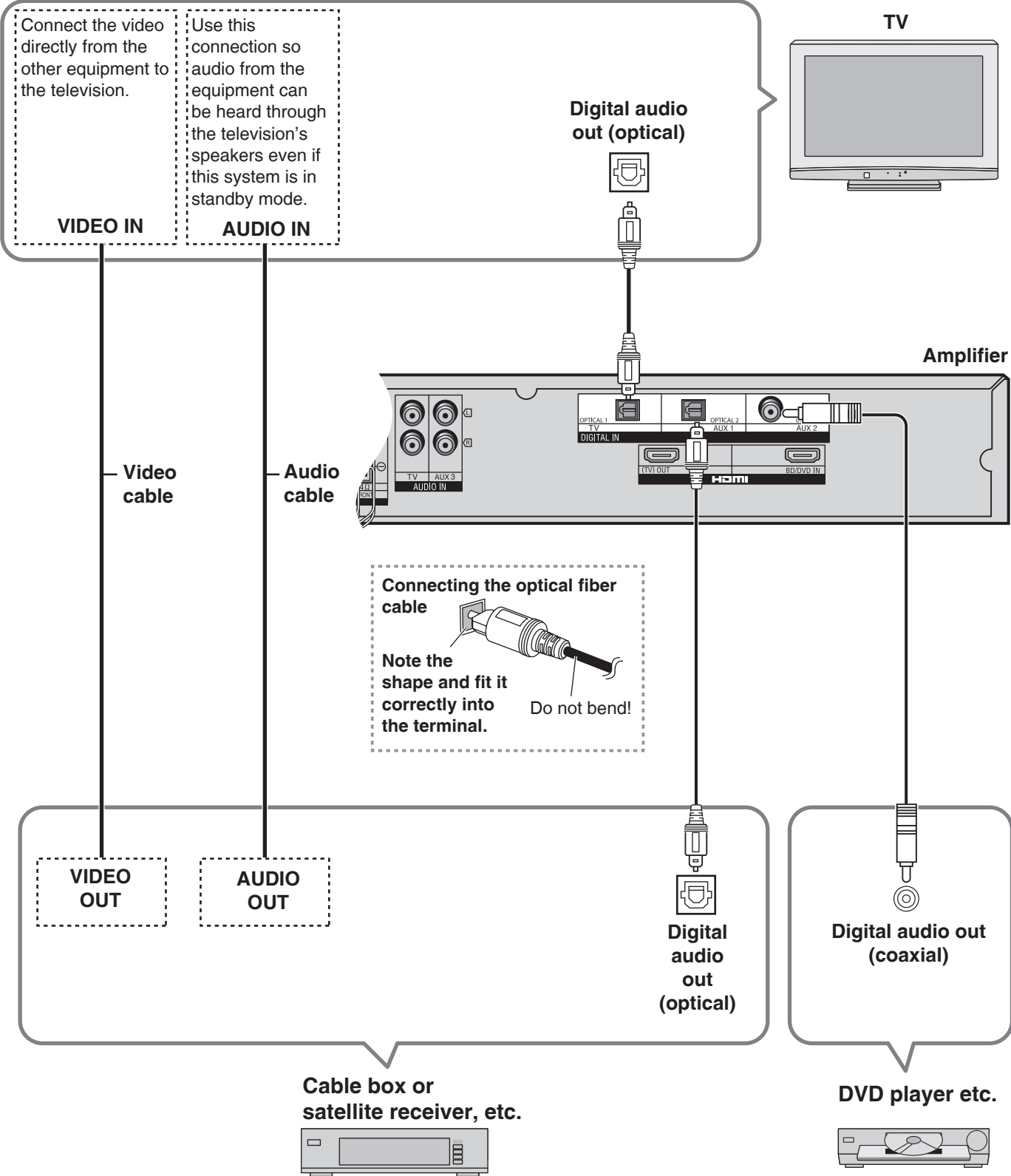
Other connections

Connecting a set top box (cable or satellite)

Connection cable

Optical fiber cable (not included) 	Coaxial cable (not included) 
--	--

- Refer to the operating instructions for the equipment you are connecting for the correct type of video cable.



- Turn off all components before making any connections.
- To connect equipment, refer to the appropriate operating instructions.

Connecting a combination DVD recorder/VCR

Connection for equipment with DVD/VCR terminal.

Connection cable

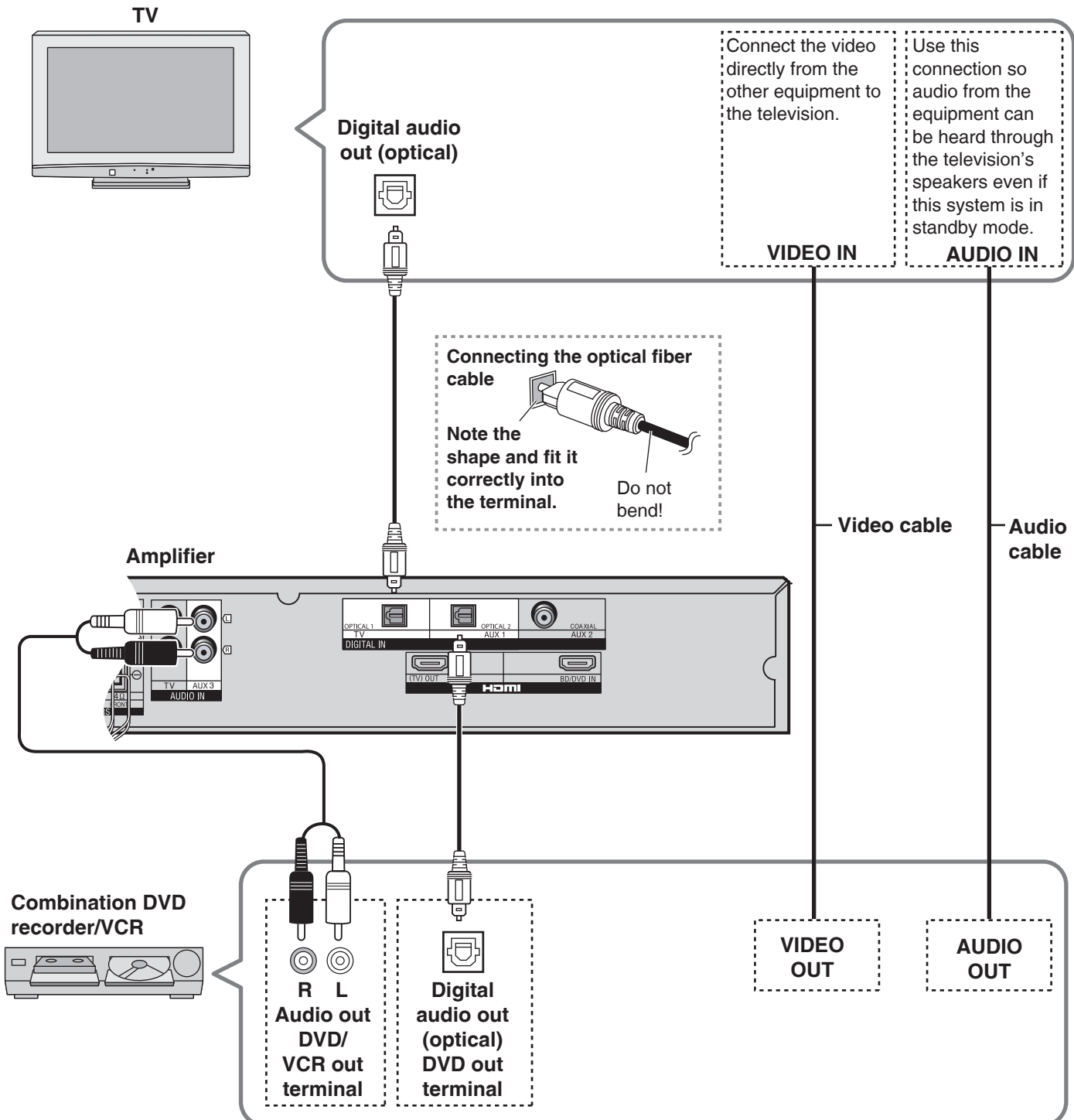
Optical fiber cable (not included)



Stereo connection cable (not included)



- Refer to the operating instructions for the equipment you are connecting for the correct type of video cable.

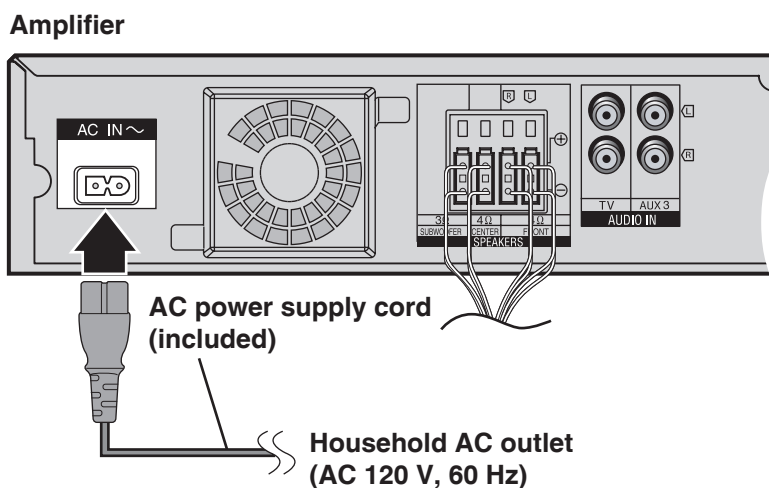


Note

See page 25 for playback.

AC power supply connection

Connect AC power supply cord after all other cables are connected.



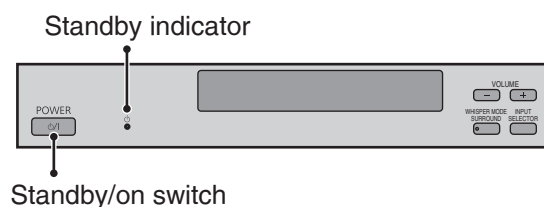
Note

- The included AC power supply cord is for use with this system only. Do not use it with other equipment.
- Also, do not use AC power supply cord for other equipment with this system.

Conserving power

This system consumes a small amount of power, even when it is in standby mode (approx. 0.7 W). To save power when the system is not to be used for a long time, unplug it from the household AC outlet. You will need to reset some memory items after plugging in this system.

“Standby” indicator



Standby/on switch [⏻/⏻]

Press to switch the unit from on to standby mode or vice versa. In standby mode, the unit is still consuming a small amount of power.



Standby indicator [⏻]

When the unit is connected to the AC mains supply, this indicator lights up in standby mode and goes out when the unit is turned on.

Checking speaker output



You can check audio output with a test signal

1. Press to turn on the system.
2. Press to output the test signal. 
3. Press to adjust the volumes of  front speakers to the normal listening level.
 - Test signal is output from one speaker at a time for two seconds in the following order:
L (Front left) → **C** (Center) → **R** (Front right) → **SUBW** (Subwoofer)
4. Press to stop the test signal.

Note

Check connections when the speaker does not have output the test signal. (→ page 8)

Adjusting speaker output

If you feel the output of the center speaker and subwoofer are not balanced with front speakers adjust the speaker output according to your preference.

1. Output the test signal. (→ above step 1 to 3)
2. Press to select a speaker for adjustment.
SUBW (Subwoofer) → **C** (Center)
3. Press to adjust each speaker's output level.
 - The test signal comes from the speaker being adjusted.
 - Test signal is output again in above order 2 seconds after adjustment.
4. Press to stop the test signal.



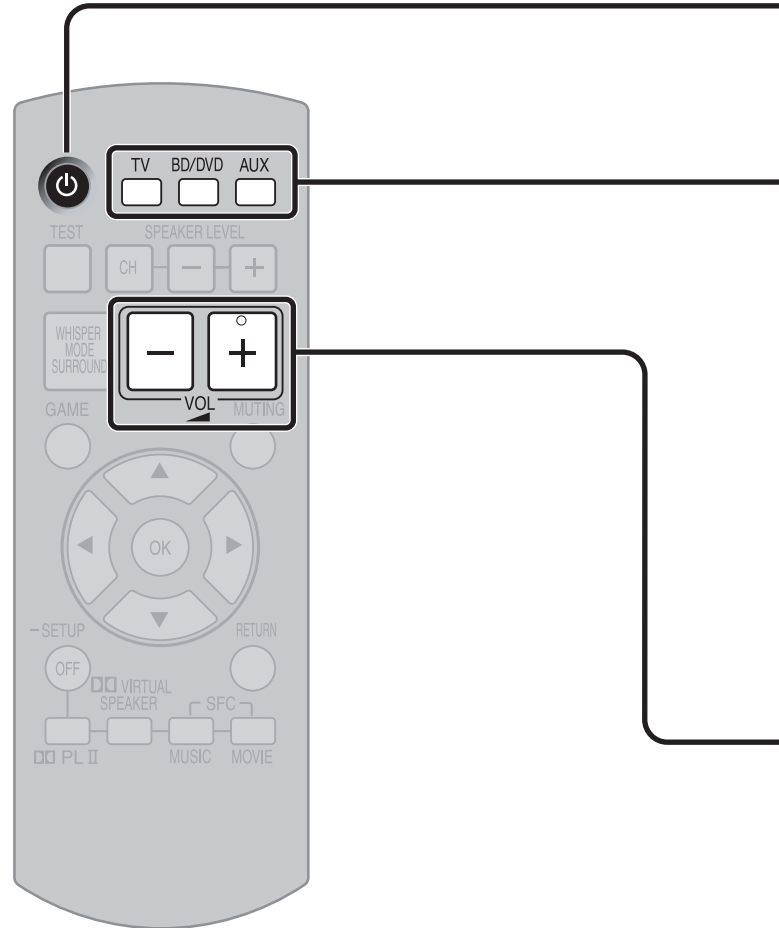
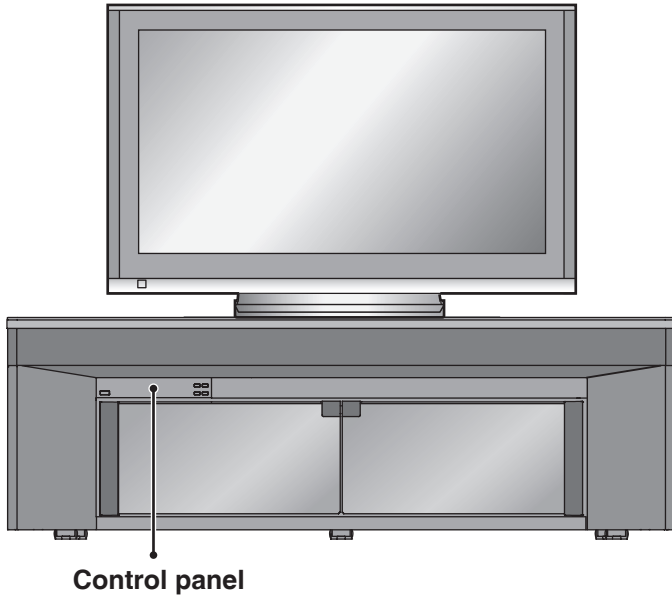

Adjustment range:
SUBW: OFF, MIN,
 1 to 19, MAX
C: - 6 to + 6

Note

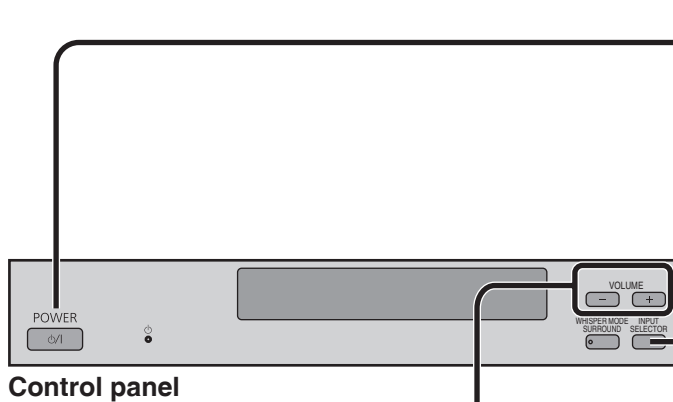
- To adjust the front speaker volumes, press [VOL ◀ -, +]. To adjust the volume balance of left and right front speakers, see "Adjusting the balance". (→ page 30)
- When you select "OFF" for subwoofer adjustment, there is no output from the subwoofer.
- Even if you adjust each channel level in this adjustment, each channel level setting in each SFC mode does not change.
- When you make this adjustment, Dolby Virtual Speaker functions. When playing 2-channel sources, Dolby Pro Logic II also works in conjunction. (→ pages 26 and 27)
- You can adjust the speaker level while playing movies and music. (→ page 29)

Enjoying movies and music

Preparation Turn on the television and switch its input to match the connection (HDMI, for example) using television remote control.



Operation on the control panel



1 Turn on the system

Press

2 Select the source.

Press (The input source switches each time you press the button.)

TV	: TV
BD/DVD	: Blu-ray Disc player/ DVD recorder
AUX 1	: AUX1 terminal
AUX 2	: AUX2 terminal
AUX 3	: AUX3 terminal


3 Start play on the other equipment.

4 Adjust the volume.

Press

■ See page 3 for digital signals that can be played on this system.

1  **To turn on the system**
Press the button.

2  **To select the source**
Press one of these buttons.

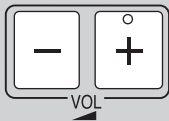
 (factory setting)


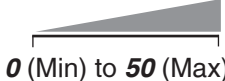
TV	: TV
BD/DVD	: Blu-ray Disc player/ DVD recorder
AUX 1	: AUX1 terminal
AUX 2	: AUX2 terminal
AUX 3	: AUX3 terminal

■ **“AUX 1”, “AUX 2” and “AUX 3”**
switch every time you press [AUX].

3 **Start play on the other equipment.**

■ You can enjoy the variety of surround effects. (→ pages 26 and 27)

4  **To adjust the volume**
Press the buttons.

■ **After playback, reduce the volume level and turn off.**

Note

- Depending on the playback source, you may feel the volume of the subwoofer or center speaker is not balanced with the volume of the front speakers. In this case, you can adjust the speaker volume during playback. (→ page 29)
- Even if you switch input to sources other than **“BD/DVD”**, images (or audio) of the equipment connected to BD/DVD terminal are output from TV output terminal.

Enjoying images and audio when this system is OFF

- When image equipment such as TV and recorder is connected to this system via HDMI (→ page 17), images/audio signals from the recorder go through this system and are transmitted to TV even if this system is turned off. (**Standby through function**) This is convenient to enjoy only with TV speaker.
- Images recorded with x.v.Color (→ page 38) are also supported.

Note

When you turn this system off, the audio/video signals from a recorder connected to this system's BD/DVD HDMI input terminal are output through the television, even if you have set input on this system to anything other than **“BD/DVD”**. (The selector returns to the previous setting when you turn this system on again.)

Playing a DVD recorder with built-in VCR

If the equipment has the output terminal specifically for DVD/VHS, select input as described in step 2 above.

- To enjoy DVD: select **“AUX 1”**.
- To enjoy video: select **“AUX 3”**.

Enjoying movies and music

The effects for sound field differ depending on input source. Select the mode you prefer.

Sound field

■ Dolby Virtual Speaker

You can enjoy surround effects just like 5.1 channel. (Dolby Pro Logic II works with video cassettes or CD stereo sources.) Dolby Virtual Speaker has the following modes.

REFERENCE (Standard mode)	Standard sound effect.
WIDE (Wide mode)	Broadens the effect to the left and right.

■ Dolby Pro Logic II

You can enjoy 2-channel sources including CD with the surround effect.

■ SFC (Sound Field Control)

You can add presence and spread to surround sound according to your choice when you use SFC with Dolby Digital, DTS, stereo sources (video, CD, etc.). SFC has the following modes.

MUSIC		MOVIE	
LIVE	Imparts the reflection and spread of a large concert hall.	DRAMA	Best suited for dialogs in drama movies.
POP/ROCK	Best suited for dynamic sound such as pop and rock music.	ACTION	Best suited for action movies with impact.
VOCAL	Best suited to enhance vocals.	SPORTS	Enjoy a feeling like being at a live sporting event.
JAZZ	Enjoy sound reflections as if you were in a small Jazz club.	MUSICAL	Enjoy a feeling like being at a live musical performance.
DANCE	Enjoy a dance hall like audio effect.	GAME	Enjoy games with greater audio impact.
		MONO	Best suited for older monaural audio movies.

Note

- See page 8 about how to display the surround digital signal/sound field.
- If the input source is 2-channel, Dolby Virtual Speaker also works in conjunction by pressing [DOLBY PL II].
- SFC is not available for multi-channel LPCM signal.
- You cannot use Dolby Virtual Speaker, Dolby Pro Logic II and SFC when the source contains PCM signals with sampling frequencies of over 48 kHz. They are automatically cancelled if those signals are input. To use the effect when playing back other sources, press [DOLBY VIRTUAL SPEAKER], [DOLBY PL II] or [SFC MUSIC, MOVIE] again to select.
- You can also press [GAME] on the remote control to select "**GAME**" mode (➡ above) of SFC. (➡ page 29)
- When sound field is cancelled, the previous condition before sound field is cancelled returns by changing input source, turning the system ON/OFF, or switching input.
- This system supports 7.1 channel LPCM signals.
You can enjoy wider sound field effects when playing back.
The following display appears when 7.1 channel LPCM signals arrive.

7.1 LPCM



Using Dolby Virtual Speaker

Press

- The mode switches each time you press the button. (→ page 26)

REFERENCE

Using Dolby Pro Logic II

Press

Using SFC (Sound Field Control)

You can enjoy by adding your favourite surround effect in addition to the Dolby Virtual Speaker (→ above) effect.

Press

- The mode switches each time you press the button. (→ page 26)

LIVE

■ To cancel SFC mode ➡ Press

Cancelling sound field

Press

- The surround effects disappear for 2-channel sources such as CD and TV.
- The surround digital signals which input sources are Dolby digital or DTS and multi-channel LPCM signals are converged to 3.1-channel and the signals are output from the left and right front speakers, center speaker and subwoofer.

Using the VIERA Link “HDAVI Control”™

What is VIERA Link “HDAVI Control” ?

VIERA Link™ is a new name for EZ Sync™.

VIERA Link “HDAVI Control” is a convenient function that offers linked operations of this system, and a Panasonic TV (VIERA) or DVD recorder (DIGA) under “HDAVI Control”. You can use this function by connecting the equipment with the HDMI cable. See the operating instructions for connected equipment for operational details.

- VIERA Link “HDAVI Control”, based on the control functions provided by HDMI which is an industry standard known as HDMI CEC (Consumer Electronics Control), is a unique function that we have developed and added. As such, its operation with other manufacturers' equipment that supports HDMI CEC cannot be guaranteed.
- **This system supports “HDAVI Control 3” function.**
“HDAVI Control 3” is the newest standard (current as of December, 2007) for Panasonic's HDAVI Control compatible equipment. This standard is compatible with Panasonic's conventional HDAVI equipment.
- Please refer to individual manuals for other manufacturers' equipment supporting VIERA Link function.

You can enjoy the following by using the remote control of TV (VIERA)

① You can select “Speaker Selection” (“Home Cinema” or “TV”).

Home Cinema: This system will be automatically turned on if it is in standby mode and the sound is from this system's speaker. You can also adjust the volume level by using the volume control buttons.

TV: TV speakers are active.

② When you switch off the TV (VIERA), this system automatically turns off.

When VIERA Link “HDAVI Control” compatible recorder (DIGA) is connected with HDMI cable, the recorder (DIGA) also turns off.

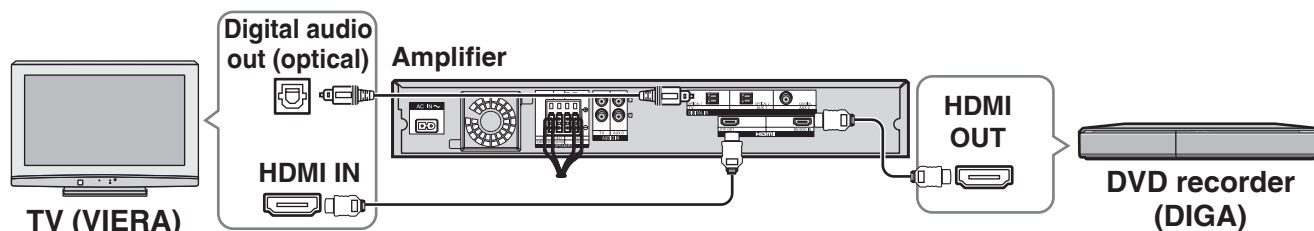
Note

- When you operate the TV (VIERA) such as selecting a channel this system's input selector will automatically switch to “TV”
- When you operate DIGA DVD recorder, this system's input selector will automatically switch to “BD/DVD”.
- To operate other functions, use this system's remote control.

Connection

Connect your home theater equipment (VIERA Link “HDAVI Control” compatible VIERA television and DIGA DVD recorder) with an HDMI cable.

- It is recommended that you use Panasonic's HDMI cable. Non-HDMI-compliant cables cannot be utilised.
Recommended part number: RP-CDHG10 (1.0 m/3.3 ft), RP-CDHG15 (1.5 m/4.9 ft), RP-CDHG20 (2.0 m/6.6 ft), RP-CDHG30 (3.0 m/9.8 ft), RP-CDHG50 (5.0 m/16.4 ft), etc.
- Only with HDMI cable connection, you cannot enjoy TV sounds on this system. Connect TV to this system with the optical fiber cable to enjoy TV sound.



Setup

- ① Switch on all your equipment.
- ② Switch on your television (VIERA).
- ③ Switch television (VIERA) input to HDMI terminal that this system is connected to.
- ④ Ensure that this system's input is set to “BD/DVD” in order to view pictures from DIGA correctly.

Note

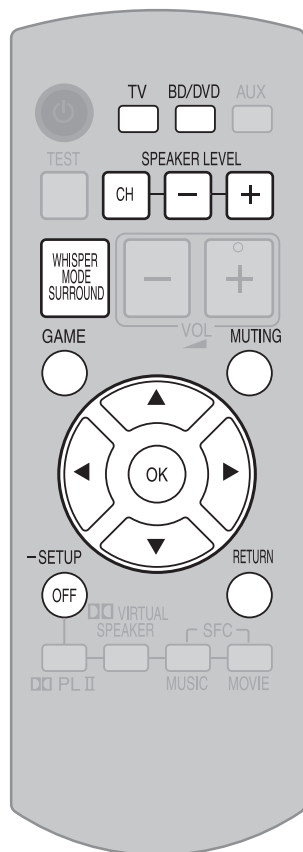
This setup should be done each time when the following conditions occur:

- for the first time
- when adding or reconnecting equipment
- when changing setup

When not using this function

Set VIERA Link “HDAVI Control” to “OFF”. (↪ page 31)

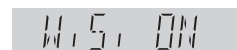
Functions and settings



Using “WHISPER MODE SURROUND”

You can enjoy dynamic surround effect even when the sound volume level is low.

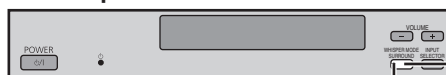
Press



- **To cancel** Press again.
If cancelled, “**W.S. OFF**” is displayed.

This setting can be made on control panel as well.

Control panel



[WHISPER MODE SURROUND] indicator

- When this function is on, [WHISPER MODE SURROUND] indicator lights up on the control panel.

Note

- WHISPER MODE SURROUND cannot be used in the following cases.
When Dolby Virtual Speaker is off
If the above setting is made when this function is on, [WHISPER MODE SURROUND] indicator disappears and this function temporarily becomes off.

Using “GAME”

Enjoy gaming with more impact.

Press



- “**GAME**” mode (→ pages 26 and 27) in SFC is selected.
- **To cancel** Press again.
If cancelled, SFC’s effect itself is cancelled.

Muting

“**MUTING IS ON**” scrolls across the display while the volume is muted.

Press



- **To cancel** Press again.
- Muting is cancelled when you switch the system to standby.
- Muting is also cancelled when you adjust the volume.

Adjusting speaker output

Depending on the playback source, you may feel the volume of the subwoofer or center speaker is not balanced with the volume of the front speakers. In this case, you can adjust the speaker volume during playback.

- 1 Press to select a speaker for adjustment.

(The speaker is switched each time you press the button.)

SUBW (Subwoofer) → **C** (Center)



- 2 Press to adjust each speaker’s output level.

Adjustment range: **SUBW:** OFF, MIN, 1 to 19, MAX
C: – 6 to +6

Note

- To adjust the volume balance of the front speakers, see “Adjusting the balance”. (→ page 30)
- There is no output from the subwoofer if you select “**OFF**”.
- If the sound is distorted, lower the level.
- You cannot adjust the output level of speakers if the speakers’ audio output is set to off. (→ pages 26 and 27)
- You can adjust the speaker’s output level in SFC’s each mode respectively. (→ pages 26 and 27)



Functions and settings

REAL CENTER function

Makes the dialog from the center speaker clearer when playing surround sources.

Factory setting is "ON".
See right to set it "OFF".

1 Press and hold  for about 2 seconds.

2 Press  to select "REAL C.". 

➔ Press  to confirm.

• Select "EXIT" and confirm to finish the setup mode.

REAL C., *BASS, *TREBLE, BALANCE, HDMI, TV DELAY, DUAL PRG, DRCOMP, ATTENUATOR, REMOTE, INPUT MODE, RESET, EXIT


※ Only appears when audio adjustment can be made.

3 Press  to select "OFF". 

➔ Press  to confirm.

Factory setting: ON

• The effect changes as soon as you select "ON" or "OFF" but you must press [OK] to confirm selection.

4 Press  a few times to select "EXIT". 

➔ Press  to confirm.

■ Return to previous menu/cancel.


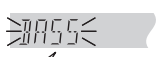

Press 

Adjusting sound quality

You can adjust the level of bass and treble.

Input signals must be 2 channel of either analog or PCM.
This setting is not displayed in other conditions. Make sure the above setting is made before setup this function.

1 Press and hold  for about 2 seconds.

2 Press  to select "BASS" or "TREBLE".  

➔ Press  to confirm.

• Select "EXIT" and confirm to finish the setup mode.



REAL C., *BASS, *TREBLE, BALANCE, HDMI, TV DELAY, DUAL PRG, DRCOMP, ATTENUATOR, REMOTE, INPUT MODE, RESET, EXIT

※ Only appears when audio adjustment can be made.

3 Press  to adjust range. 

➔ Press  to confirm.

Adjustment range: -6 to +6

4 Press  a few times to select "EXIT". 

➔ Press  to confirm.

■ Return to previous menu/cancel.

Press 

Adjusting the balance

You can adjust the balance of the front speakers.
L: Front speaker (left)
R: Front speaker (right)

1 Press and hold  for about 2 seconds.



2 Press  to select "BALANCE". 

➔ Press  to confirm.

• Select "EXIT" and confirm to finish the setup mode.



REAL C., *BASS, *TREBLE, BALANCE, HDMI, TV DELAY, DUAL PRG, DRCOMP, ATTENUATOR, REMOTE, INPUT MODE, RESET, EXIT

※ Only appears when audio adjustment can be made.

3 Press  to adjust the balance. 

➔ Press  to confirm.

Use the bar as a guide.

4 Press  a few times to select "EXIT". 

➔ Press  to confirm.

■ Return to previous menu/cancel.

Press 

Reducing standby power consumption (Standby mode)

Standby through function (→ pages 25 and 38) does not work in this mode if you have connected through the HDMI terminal. VIERA Link "HDAVI Control" (→ page 28) will not function when this system is off.

1 Press and hold  for about 2 seconds.

2 Press   to select "HDMI".

REAL C., *BASS, *TREBLE, BALANCE, HDMI, TV DELAY, DUAL PRG, DRCOMP, ATTENUATOR, REMOTE, INPUT MODE, RESET, EXIT

※ Only appears when audio adjustment can be made.

3 Press   to select "STNBY".

STNBY ON
STNBY, CTRL

4 Press   to select "OFF".

STNBY OFF

OFF : Standby power consumption reduced (approx. 0.3 W)
ON : Normal standby power consumption

5 Press  a few times to select "EXIT".

EXIT

■ Return to previous menu/cancel.

Press 

Press  to confirm.

- Select "EXIT" and confirm to finish the setup mode.

Press  to confirm.

Press  to confirm.

Factory setting: ON

Press  to confirm.



Setting VIERA Link "HDAVI Control" to "OFF"

1 Press and hold  for about 2 seconds.

2 Press   to select "HDMI".

REAL C., *BASS, *TREBLE, BALANCE, HDMI, TV DELAY, DUAL PRG, DRCOMP, ATTENUATOR, REMOTE, INPUT MODE, RESET, EXIT

※ Only appears when audio adjustment can be made.

3 Press   to select "CTRL".

CTRL ON
STNBY, CTRL

4 Press   to select "OFF".

CTRL OFF

OFF : When the operation is not linked
ON : When the operation is linked

5 Press  a few times to select "EXIT".

EXIT

■ Return to previous menu/cancel.

Press 

Press  to confirm.

- Select "EXIT" and confirm to finish the setup mode.

Press  to confirm.



Press  to confirm.

Factory setting: ON

Press  to confirm.

Adjusting the time lag by delaying audio output when pictures on TV arrives after sounds

1 Press and hold  for about 2 seconds.

2 Press   to select "TV DELAY".

REAL C., *BASS, *TREBLE, BALANCE, HDMI, TV DELAY, DUAL PRG, DRCOMP, ATTENUATOR, REMOTE, INPUT MODE, RESET, EXIT

※ Only appears when audio adjustment can be made.

3 Press   to select setting.

40

AUTO*, OFF, 10, 20, 30, 40

※ For only combination with Panasonic TV (VIERA) Supporting HDAVI Control 3.

4 Press  a few times to select "EXIT".

EXIT

■ Return to previous menu/cancel.

Press 

Press  to confirm.

- Select "EXIT" and confirm to finish the setup mode.

Press  to confirm.



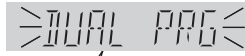

Factory setting: AUTO

Press  to confirm.


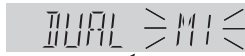
Functions and settings





Switching between dual sounds

You can switch between dual sounds of Dolby Digital signals.

- 1 Press and hold  for about 2 seconds.
- 2 Press  to select "DUAL PRG".  Press  to confirm.
 - Select "EXIT" and confirm to finish the setup mode.

REAL C., *BASS, *TREBLE, BALANCE, HDMI, TV DELAY, DUAL PRG, DRCOMP, ATTENUATOR, REMOTE, INPUT MODE, RESET, EXIT





※ Only appears when audio adjustment can be made.
- 3 Press  to select the sound. 

M1: Main audio, M2: Sub channel audio output, M1+M2: Main + Sub channel audio output
- 4 Press  a few times to select "EXIT".  Press  to confirm.
 - Return to previous menu/cancel. Press 




Clear audio at low volume

Dynamic range compression for Dolby Digital


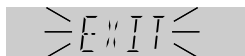


It compresses the dynamic range so that you can still hear dialog and leave the sound field unaffected. Use this function when you have to turn the volume down, such as late at night.

- 1 Press and hold  for about 2 seconds.
- 2 Press  to select "DRCOMP".  Press  to confirm.
 - Select "EXIT" and confirm to finish the setup mode.

REAL C., *BASS, *TREBLE, BALANCE, HDMI, TV DELAY, DUAL PRG, DRCOMP, ATTENUATOR, REMOTE, INPUT MODE, RESET, EXIT





※ Only appears when audio adjustment can be made.
- 3 Press  to select setting.  Press  to confirm.

OFF: Normal playback; STANDARD: The level recommended by the producer of the software for household viewing; MAX: The maximum allowable compression (recommended for night viewing)




Factory setting: OFF
- 4 Press  a few times to select "EXIT".  Press  to confirm.
 - Return to previous menu/cancel. Press 

Switching the attenuator


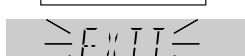


Switch the attenuator "ON" when big sounds become distorted while playing an analog input source.

- 1 Press and hold  for about 2 seconds.
- 2 Press  to select "ATTENUATOR".  Press  to confirm.
 - Select "EXIT" and confirm to finish the setup mode.

REAL C., *BASS, *TREBLE, BALANCE, HDMI, TV DELAY, DUAL PRG, DRCOMP, ATTENUATOR, REMOTE, INPUT MODE, RESET, EXIT

※ Only appears when audio adjustment can be made.
- 3 Press  to select "ON".  Press  to confirm.

ON, OFF

Factory setting: OFF
- 4 Press  a few times to select "EXIT".  Press  to confirm.
 - Return to previous menu/cancel. Press 

Setting input signals

Most sources can be played with "AUTO" (factory setting). However, in the following cases, change the input signal detection setting.

- When the beginning of the song is cut during playback of CD, set to "PCM" (PCM FIX).
- When the signal is not detected during playback of DTS sources, set to "DTS" (DTS FIX).
- You can fix the signal type (digital or analog) supplied by TV.

When noise occurs, return the setting to "AUTO".

1 Press and hold  for about 2 seconds.

2 Press   to select "INPUT MODE".

INPUT MODE

Press  to confirm.

- Select "EXIT" and confirm to finish the setup mode.

REAL C., *BASS, *TREBLE, BALANCE, HDMI, TV DELAY, DUAL PRG, DRCOMP, ATTENUATOR, REMOTE, INPUT MODE, RESET, EXIT

* Only appears when audio adjustment can be made.

3 Press   to select source.

TV AUTO

Press  to confirm.

4 Press   to select input signal.


TV, DVD, AUX1, AUX2

Press  to confirm.

AUTO: Automatic detection
PCM: PCM (from CDs) digital input fixed
DTS: DTS digital input fixed
ANLG (TV only): Fixes the input signal to analog
DIG (TV only): Fixes the input signal to digital

Factory setting: AUTO

■ Repeat steps 3 and 4 to change setting.

5 Press  a few times to select "EXIT".

EXIT

Press  to confirm.



■ Return to previous menu/cancel.

Press 

Reset (factory settings)

The operation settings for the system will be initialised to the settings made at the time of shipment.

1 Press and hold  for about 2 seconds.

2 Press   to select "RESET".

RESET

Press  to confirm.

- Select "EXIT" and confirm to finish the setup mode.

REAL C., *BASS, *TREBLE, BALANCE, HDMI, TV DELAY, DUAL PRG, DRCOMP, ATTENUATOR, REMOTE, INPUT MODE, RESET, EXIT

* Only appears when audio adjustment can be made.

3 Press   to select "YES".

RESET YES

Press  to confirm.

YES, NO

- All the settings are reset when you select "YES" and the input selector automatically switches to "BD/DVD".
- If you select "NO", you will return to step 2. To exit setup mode, press [RETURN] a few times to display "EXIT", and then press [OK].

Functions and settings

When other equipment (mini component system, AV amp, etc.) manufactured by Panasonic operate

When using this system's remote control, other equipment may operate. In this case, switch this system's remote control code to "**REMOTE 1**". Do the following **to set the same code number for this system and remote control**.

1. Press and hold  for about 2 seconds.

2. Press  to select "**REMOTE**".  ➔ Press  to confirm.

**REAL C., *BASS, *TREBLE, BALANCE, HDMI,
TV DELAY, DUAL PRG, DRCOMP, ATTENUATOR,
REMOTE, INPUT MODE, RESET, EXIT**

• Select "**EXIT**" and confirm to finish the setup mode.

※ Only appears when audio adjustment can be made.

3. Press  to select the number.  ➔ Press  to confirm.

1, 2

Factory setting: 2




- The remote control code on this system is set.
- You cannot finish the setting mode until the setting on the remote control is changed. Go to step 4.

4. While pressing , press and hold  or  for about 2 seconds.








TV: Remote control code 1

BD/DVD: Remote control code 2 (factory setting)

- The remote control code on the remote control is set.
- Select the same number as the code number you have selected in step 3.

5. Press  a few times to select  ➔ Press  to confirm.

Error messages

Display	Check point/Cause/Countermeasure	Pages
 	<ul style="list-style-type: none"> Set the same remote control code for this system and remote control. If "REMOTE 2" is displayed, set remote control code to "2". If "REMOTE 1" is displayed, set remote control code to "1". 	34
	<ul style="list-style-type: none"> The equipment connected by the HDMI cable is not compatible with this system's copyright protection technology. 	—
	<ul style="list-style-type: none"> The system is receiving video signals that are incompatible with it through HDMI connection. Check the settings of the connected equipment. 	—
	<ul style="list-style-type: none"> A problem has occurred with the HDMI connection. Try the following to correct the problem. Consult your dealer if the error code remains on the display. <ul style="list-style-type: none"> Turn the connected equipment off and on again. Disconnect the HDMI cable then reconnect it. Do not connect more than 2 equipment in series to the output of this system. 	— — —
 (Scrolling)	<ul style="list-style-type: none"> You cannot use Dolby Virtual Speaker, Dolby Pro Logic II and SFC for dual sounds. 	32
 (Scrolling)	<ul style="list-style-type: none"> You cannot use Dolby Virtual Speaker, Dolby Pro Logic II and SFC effect with PCM signals with sampling frequency over 48 kHz. SFC is not available for multi-channel LPCM signal. 	26 26

Specifications

■ AMPLIFIER SECTION

RMS Output Power of each channel driven

10 % total harmonic distortion

1 kHz Front CH 70 W per channel (4 Ω)

1 kHz Center CH 70 W per channel (4 Ω)

100 Hz Subwoofer CH 90 W per channel (3 Ω)

Total RMS Output Power 300 W

Rated minimum sine wave RMS power output

1 % total harmonic distortion (Dolby Digital Mode)

120 Hz - 20 kHz Front CH 45 W per channel (4 Ω)

120 Hz - 20 kHz Center CH 43 W per channel (4 Ω)

45 Hz - 120 Hz Subwoofer CH 57 W per channel (3 Ω)

Total FTC Output Power 190 W

Rated minimum sine wave RMS power output

1 % total harmonic distortion (Stereo mode)

120 Hz - 20 kHz Front CH 47 W per channel (4 Ω)

45 Hz - 120 Hz Subwoofer CH 57 W per channel (3 Ω)

Total FTC Output Power 151 W

Total harmonic distortion

half power at 1 kHz (Front CH) 0.5 % (4 Ω)

Input sensitivity

TV, AUX 3 450 mV, IHF'66

S/N at rated power

BD/DVD, TV, AUX 1, AUX 2 80 dB

Input impedance

TV, AUX 3 47 kΩ

Tone controls

BASS 50 Hz, +6 dB to -6 dB

TREBLE 20 kHz, +6 dB to -6 dB

Digital input/output

HDMI Input 1

HDMI Output 1

Optical digital input 2

Coaxial digital input 1

This system supports "HDAVI Control 3" function.

Analog input/output

Analog audio input 2

■ OPERATING CONDITIONS:

Operating temperature range: 0°C to +40°C (+32°F to +104°F)

Operating humidity range: 20% to 80% RH (no condensation)

■ GENERAL

Power supply

AC 120 V, 60 Hz

Power consumption

Main set 68 W

Standby (HDMI ON) 0.7 W

Standby (HDMI OFF) 0.3 W

■ SPEAKER SYSTEM

FRONT (L/R)

1-Way 1 Speaker System (Bass Reflect)

6.5 cm (2 1/2") Cone Type Full Range x1

70 W (Max/4Ω)*

Input power (IEC)

79 dB/W (1.0 m)

Output sound pressure level

80 Hz - 25 kHz (-16 dB)

Frequency range

95 Hz - 22 kHz (-10 dB)

CENTER

1-Way 1 Speaker System (Bass Reflect)

6.5 cm (2 1/2") Cone Type Full Range x1

70 W (Max/4Ω)*

Input power (IEC)

79 dB/W (1.0 m)

Output sound pressure level

80 Hz - 25 kHz (-16 dB)

Frequency range

95 Hz - 22 kHz (-10 dB)

SUBWOOFER

1-Way 2 Speaker System (Bass Reflect)

13 cm (5 1/8") Cone Type Woofer x2

90 W (Max/3Ω)

Input power (IEC)

82 dB/W (1.0 m)

Output sound pressure level

35 Hz - 600 Hz (-16 dB)

Frequency range

42 Hz - 500 Hz (-10 dB)

■ RACK SYSTEM

(INCLUDING SPEAKER)

Dimensions (W x H x D) 1300 mm x 444 mm x 458 mm

(51 1/8" x 17 15/32" x 18 1/32")

Mass approx. 50kg (110.2 lbs)

* Mass is a Completed (AMP, Speaker Unit inc)

Maximum Loading Weight 80 kg (176.4 lbs)

* Rating with low-cut filter equipped amplifier

Note

1. Specifications are subject to change without notice.

2. Total harmonic distortion is measured by the digital spectrum analyser.

Troubleshooting guide

Before requesting service, make the following checks.

If you are in doubt about some of the check points, or if the remedies indicated in the chart do not solve the problem, refer to “Customer Services Directory” on page 39.

	Problem	Possible solution	Pages
Common problems	No power.	<ul style="list-style-type: none"> Ensure the AC power supply cord is connected. 	22
	No sound or image after playback starts.	<ul style="list-style-type: none"> Select the correct source. Turn the muting off. Check that the digital signals can be decoded by this system. Cannot playback PCM signal with sampling frequency over 96 kHz. Check connections to other equipment. Set “DIG” or “ANLG” in “Setting input signals”. Set “AUTO” in “Setting input signals”. Turn this system off then on again. 	24, 25 29 3 16 to 21 33 33 —
	The remote control does not work.	<ul style="list-style-type: none"> Replace the batteries if they are worn. 	9
	The standby indicator lights up even if the system turned off.	<ul style="list-style-type: none"> When you connect the AC power supply cord to the household AC outlet, the standby indicator lights up while the system is off. When you turn the system on, the indicator goes off. 	22
	No sound from microphone connected to DVD player (karaoke).	<ul style="list-style-type: none"> No sound output from microphone if connection to this system is digital. Change to analog connection and input. Make analog connection to AUX3. 	19
	There is no DTS audio output. There is audio output, but the DTS decoder indicator is not lit.	<ul style="list-style-type: none"> Set the DTS Digital Audio Output setting on the DVD player, Blu-ray Disc player or DVD recorder to “Bitstream”. Set “DTS” in “Setting input signals”. 	— 33
	Sound is not heard when playing DVD audio.	<ul style="list-style-type: none"> This may occur due to digital copyright protection of the disc if using digital connection. This system may not be able to play sources with sampling frequency over 48 kHz. 	—
	Sound stops. (“F61” appears on the display for about a second.) The protection circuit activates when some abnormality is detected, and turns off the system automatically.	<ul style="list-style-type: none"> Straining of the speakers through excessive volume or power. This may occur if you use the system in an extremely hot environment. Curtains or other objects may be blocking the exhaust hole. ⇒ Determine and correct the cause, then turn the system on. (The protection circuit is reset.) (Consult your dealer if the problem persists.) 	— — —
	“F70 □□□□” appears on the display. (“DSP” or “HDMI” is displayed in place of □.)	<ul style="list-style-type: none"> Turn off the system, unplug the AC power supply cord, and consult your dealer. 	—
	“F76” appears on the display. (After display, the system turns off.)	<ul style="list-style-type: none"> Disconnect the AC power supply cord, and consult your dealer. 	—
Sound field	No sound in surround mode.	<ul style="list-style-type: none"> Set to Dolby Virtual Speaker, Dolby Pro Logic II or SFC. 	26, 27
	Cannot use Dolby Virtual Speaker, Dolby Pro Logic II or SFC.	<ul style="list-style-type: none"> You cannot use these features with PCM signals with sampling frequency over 48 kHz. Make analog connection to AUX3. You cannot use for Dolby Digital dual sounds. 	19 32
HDMI	When using an HDMI connection, the first few seconds of sound is cut off.	<ul style="list-style-type: none"> This may occur if you start play from a chapter on a DVD. The following will correct the problem. ① Change the audio output setting on the Blu-ray Disc player, DVD recorder or DVD player from “Bitstream” to “PCM”. ② Change input signal setting to “PCM” in “Setting input signals”. 	— 33
	The system does not work properly.	<ul style="list-style-type: none"> The system does not work properly if you have connected the HDMI input and output terminals incorrectly. Turn the system off, unplug the AC power supply cord, and make the connections again. 	17

Problem		Possible solution	Pages
HDMI	When VIERA Link “HDAVI Control” does not function properly	<ul style="list-style-type: none"> • Confirm “Setting VIERA Link “HDAVI Control” to “OFF”” is set to “ON” (in simultaneous operation). When it is “OFF”, change to “ON”. 	31
		<ul style="list-style-type: none"> • VIERA Link “HDAVI Control” does not function in power saving standby mode when this system is turned off. See “Reducing standby power consumption (Standby mode)” and set to “ON” (normal power consumption). 	31
		<ul style="list-style-type: none"> • Check VIERA Link “HDAVI Control” settings of the connected equipment. 	—
		<ul style="list-style-type: none"> • VIERA Link “HDAVI Control” may not function when you change the connections for HDMI equipment, insert and remove the outlet, or during blackout. Do the following operations in this case. <ul style="list-style-type: none"> – Turn the TV (VIERA) on again while all the equipment connected with HDMI cables are on. – Set “VIERA Link “HDAVI Control” (HDMI equipment control)” of TV (VIERA) to “OFF” and then set to “ON” again. (For details, refer to the operating instructions for TV (VIERA).) – Connect this system to TV (VIERA) using the HDMI cable, switch the TV (VIERA) on, unplug this system’s AC power supply cord, and insert it into a household AC outlet again. 	—

Product Service

- 1. Damage requiring service**—The unit should be serviced by qualified service personnel if:
 - (a) The AC power supply cord or AC adaptor has been damaged; or
 - (b) Objects or liquids have gotten into the unit; or
 - (c) The unit has been exposed to rain; or
 - (d) The unit does not operate normally or exhibits a marked change in performance; or
 - (e) The unit has been dropped or the cabinet damaged.
- 2. Servicing**—Do not attempt to service the unit beyond that described in these operating instructions. Refer all other servicing to authorized servicing personnel.
- 3. Replacement parts**—When parts need replacing ensure the servicer uses parts specified by the manufacturer or parts that have the same characteristics as the original parts. Unauthorized substitutes may result in fire, electric shock, or other hazards.
- 4. Safety check**—After repairs or service, ask the servicer to perform safety checks to confirm that the unit is in proper working condition.

The servicer will require all components to service your system. Therefore, should service ever be necessary, be sure to bring the entire system.

Product information

For product information or assistance with product operation, refer to “Customer Services Directory” on page 39.

The model number and serial number of this product can be found on either the back or the bottom of the unit. Please note them in the space provided below and keep for future reference.

MODEL NUMBER SC-HTR310

SERIAL NUMBER _____

User memo:

DATE OF PURCHASE _____

DEALER NAME _____

DEALER ADDRESS _____

TELEPHONE NUMBER _____

Glossary

Analog

Audio signals produced from L/R audio output terminals of general equipment is called analog audio.

CPPM (Content Protection for Prerecorded Media)

This is the copyright protection technology which prevents file copy of DVD audio.

Decoder, Decode

Decoder is the device to enable us to hear audio data that is encoded on DVD, etc., as a normal audio signal. This process is called Decode.

Digital

Blu-ray Disc players, DVD recorders, DVD players, and CD players are usually equipped with digital output terminals. Connect through the digital terminal to enjoy digital surround systems such as Dolby Digital and DTS.

Dolby Digital (DVD etc.)

Digital surround system developed by Dolby Laboratories.

Dolby Pro Logic II

This system can process not only Dolby Surround, but also other 2-channel sources to produce a 5.1-channel sound for a more realistic sound field. It is also possible to enhance old movies recorded in stereo with this dynamic 5.1-channel sound. This system uses Dolby Pro Logic II to add surround effects to stereo sources such as video cassettes and CDs.

Dolby Virtual Speaker

This system allows you to enjoy a surround effect with two front speakers, a center speaker, and a subwoofer. This is not merely a "virtual surround" effect, but rather uses the optimal speaker arrangements and listening positions for 5.1-channel sound.

DTS (Digital Theater Systems)

Digital surround system developed by DTS, Inc.

Dynamic range

Dynamic range is the difference between the lowest level of sound that can be heard above the noise of the equipment and the highest level of sound before distortion occurs.

HDMI (High Definition Multimedia Interface)

HDMI enables you to transmit digital audio and video signals using a single cable.

You can also transmit control signals using HDMI connections.

LPCM (Linear PCM)

This is one of the PCM methods and the uncompressed audio signal encoded digitally. This method is used for music CD, etc. Multi-channel LPCM signals used for Blu-ray Disc, DVD audio, etc. enable playback with higher-sound quality.

Up to 7.1 channel LPCM signals can be entered to this system.

Optical

Using optical fiber cable for digital signal input/output from DVD, CD, etc., provides better sound quality for playback or recording compared to analog. Only possible with equipment that has an optical terminal.

PCM (Pulse Code Modulation)

This is one of the methods that enables analog sounds to be converted to digital sounds.

Sampling frequency

Sampling is the process of converting the heights of sound wave (analog signal) samples taken at set periods into digits (digital encoding).

Sampling frequency is the number of samples taken per second, so larger numbers mean faithful reproduction of the original sound.

Standby through function

When this system and TV and DVD recorder are connected with HDMI cables, image/audio from DVD recorder can still be transmitted to TV even though the system is turned off.

This is useful when you want to enjoy late night viewing only with the television's speakers.

Images recorded with x.v.Color are also supported.

Surround signal

Audio signal made up with front speakers, center speaker and surround speakers. For this system, surround signal is automatically played by Dolby Virtual Speaker.

x.v.Color

This is a name of products compliant with ISO Standard for wider color space: "xvYCC". This system supports x.v.Color.

1080p

This is one of the digital hi-vision images.

1080 is the number of effective scanning lines that constitute the actual screen. This enables every detail to be beautifully expressed. Images are less flickered with progressive method that scans in order from the top. This system supports 1080p.

5.1 channel surround

Monaural and stereo use one channel and two channels respectively to reproduce sound, but 5.1-channel surround uses 5 speakers and a low frequency effect channel. The 5 channels are: 1 center speaker, 2 front speakers, and 2 surround speakers at the side of or to the rear of the sitting position. Sound output of the subwoofer is much narrower than the other speakers, and so is considered as 0.1. This is called 5.1-channel surround when played through all 5.1 channels, and with this system you can achieve a similar effect with Dolby Virtual Speaker.

Maintenance

Unplug the AC power supply cord from the household AC outlet and wipe the system using a soft and dry cloth.

- When the system is very dirty, wring the cloth soaked in water thoroughly, wipe the dirt and wipe moisture off with a dry cloth.
- Do not use solvents such as benzene, thinner, alcohol, etc. because they may cause casing to deform and coating to go off.
- Before using chemically treated cloth, read the instructions that come with the cloth carefully.

Limited Warranty

Panasonic Consumer Electronics Company,
Division of Panasonic Corporation of North America
One Panasonic Way Secaucus, New Jersey 07094

Panasonic Puerto Rico, Inc.
Ave. 65 de Infantería, Km. 9.5
San Gabriel Industrial Park, Carolina, Puerto Rico 00985

Panasonic Audio Products Limited Warranty

Limited Warranty Coverage

If your product does not work properly because of a defect in materials or workmanship, Panasonic Consumer Electronics Company or Panasonic Puerto Rico, Inc. (collectively referred to as "the warrantor") will, for the length of the period indicated on the chart below, which starts with the date of original purchase ("warranty period"), at its option either (a) repair your product with new or refurbished parts, or (b) replace it with a new or a refurbished product. The decision to repair or replace will be made by the warrantor.

Product or Part Name	Parts	Labor
Audio Products (except items listed below)	One (1) year	One (1) year
USB Reader-Writer, Personal Computer Card Adapters (in exchange for defective item)	One (1) year	Not Applicable
Accessories: Headphones, Cartridges, Microphones, Adapters	Ninety (90) days	Ninety (90) days
Rechargeable Batteries, DVD-R/-RAM Discs (in exchange for defective item)	Ten (10) days	Not Applicable
SD Memory Cards, Rechargeable Battery Packs (in exchange for defective item)	Ninety (90) days	Not Applicable

During the "Labor" warranty period there will be no charge for labor. During the "Parts" warranty period, there will be no charge for parts. You must carry-in or mail-in your product during the warranty period. If non-rechargeable batteries are included, they are not warranted. This warranty only applies to products purchased and serviced in the United States or Puerto Rico. This warranty is extended only to the original purchaser of a new product which was not sold "as is". A purchase receipt or other proof of the original purchase date is required for warranty service.

Carry-In or Mail-In Service

For Carry-In or Mail-In Service in the United States call 1-800-211-PANA (1-800-211-7262) or visit Panasonic web site: <http://www.panasonic.com>

For assistance in Puerto Rico call Panasonic Puerto Rico, Inc. (787)-750-4300 or fax (787)-768-2910.

Limited Warranty Limits And Exclusions

This warranty ONLY COVERS failures due to defects in materials or workmanship, and DOES NOT COVER normal wear and tear or cosmetic damage. The warranty ALSO DOES NOT COVER damages which occurred in shipment, or failures which are caused by products not supplied by the warrantor, or failures which result from accidents, misuse, abuse, neglect, mishandling, misapplication, alteration, faulty installation, set-up adjustments, misadjustment of consumer controls, improper maintenance, power line surge, lightning damage, modification, or commercial use (such as in a hotel, office, restaurant, or other business), rental use of the product, service by anyone other than a Factory Servicenter or other Authorized Servicer, or damage that is attributable to acts of God.

THERE ARE NO EXPRESS WARRANTIES EXCEPT AS LISTED UNDER "LIMITED WARRANTY COVERAGE". THE WARRANTOR IS NOT LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OF THIS PRODUCT, OR ARISING OUT OF ANY BREACH OF THIS WARRANTY. (As examples, this excludes damages for lost time, travel to and from the servicer, loss of media or images, data or other memory content. The items listed are not exclusive, but are for illustration only.)

ALL EXPRESS AND IMPLIED WARRANTIES, INCLUDING THE WARRANTY OF MERCHANTABILITY, ARE LIMITED TO THE PERIOD OF THE LIMITED WARRANTY.

Some states do not allow the exclusion or limitation of incidental or consequential damages, or limitations on how long an implied warranty lasts, so the exclusions may not apply to you. This warranty gives you specific legal rights and you may also have other rights which vary from state to state. If a problem with this product develops during or after the warranty period, you may contact your dealer or Servicenter. If the problem is not handled to your satisfaction, then write to the warrantor's Consumer Affairs Department at the addresses listed for the warrantor.

PARTS AND SERVICE WHICH ARE NOT COVERED BY THIS LIMITED WARRANTY ARE YOUR RESPONSIBILITY.

Customer Services Directory

Obtain Product Information and Operating Assistance; locate your nearest Dealer or Servicenter; purchase Parts and Accessories; or make Customer Service and Literature requests by visiting our Web Site at:

<http://www.panasonic.com/consumersupport>

or, contact us via the web at:

<http://www.panasonic.com/contactinfo>

You may also contact us directly at:

1-800-211-PANA (7262),

Monday-Friday 9 am-9 pm; Saturday-Sunday 10 am-7 pm, EST.

For hearing or speech impaired TTY users, TTY: 1-877-833-8855

Accessory Purchases

Purchase Parts, Accessories and Instruction Books online for all Panasonic Products by visiting our Web Site at:

<http://www.pstc.panasonic.com>

or, send your request by E-mail to:

npcparts@us.panasonic.com

You may also contact us directly at:

1-800-332-5368 (Phone) 1-800-237-9080 (Fax Only) (Monday – Friday 9 am to 8 pm, EST.)

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